ON THE

DISEASES, INJURIES, AND MALFORMATIONS

OF THE

RECTUM AND ANUS;

WITH REMARKS ON

HABITUAL CONSTIPATION.

BY

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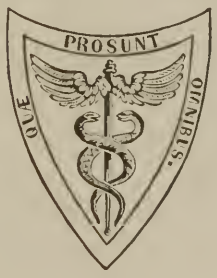

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PREFACE

TO THE

FOURTH EDITION.

This edition has been carefully revised, and some portions rewritten, with further observations and cases added, for the purpose of more fully elucidating the etiology, pathology, and treatment of this important class of diseases, and rendering the work still more worthy of the position accorded to it by the Profession.

31 Cavendish Square, 1863.

PREFACE

TO THE

THIRD EDITION.

THE rapid exhaustion of two editions of this work, the flattering testimony of the profession, and the opinions expressed by the medical press of this country, as well as by the Continental and American journals, are most gratifying to me, as affording evidence that my labors for the alleviation of human suffering, in directing the attention of the profession to the symptoms, causes, and treatment of an important class of diseases, which has hitherto been but superficially noticed by surgical writers generally, and but imperfectly understood by many of the profession, have not been unsuccessful.

For nearly twelve months the second edition of this work has been out of print; and I regret that professional demands on my time have not admitted the preparation of a third edition for the press at an earlier period. The same arrangement of the contents is observed as in the previous editions, and the same principles of treatment advocated, the soundness and correctness of which are confirmed by very considerable practical experience. The present volume has been carefully revised; and, to render it more useful, illustrations have been added of the appearances presented in the several diseases. The wood engravings are admirably executed by Mr. Bagg, from original drawings by Mr. Tuson, taken from cases occurring in my practice, and from pathological specimens in my possession.

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ON THE

RECTUM AND ANUS.

INTRODUCTION.

In the whole range of surgical pathology, no class of diseases among civilized communities is so prevalent, causes more suffering, or induces so many varied and distressing sympathetic affections as those of the rectum; happily for the sufferers none succumb more readily to judicious, and, in the majority of cases, to simple treatment, when it is put in force at an early period of the malady; but, unfortunately, it often happens, from a mistaken delicacy on the part of patients, or from some other cause, proper advice is not sought till the constitution has become seriously deranged, or the local affection no longer endurable; or it may be that, under preconceived and erroneous notions as to the nature of the affection, or from the prominence and severity of some one of the sympathetic effects, the sufferers are induced to adopt a variety of empirical remedies which fail to afford the desired relief and restoration of health, and which are often productive of the most pernicious results.

From the important functions of the rectum, from the constant or recurrent pain attending diseases affecting it, induced each time the bowels evacuate their contents, and the serious constitutional disturbance these diseases excite, they require the careful attention and deep consideration of the surgeon. A popular idea prevails, and has existed at all times, that a deeper knowledge of, and a more intimate acquaintance with, the diseases of any certain organ is obtained by an exclusive consideration of that particular part; but no greater fallacy can be conceived. An

organ or a limb has no distinct individuality, it being but a part of one whole, and depending on the normal condition of other organs or parts for its vitality and healthy function, and alike influenced by those morbid phenomena denominated disease, which, existing in one part, affects another in a greater or less degree, either by contiguity, sympathy, or connection in function; and thus it is only by a comprehensive view, and after due consideration of all the symptoms produced, and the various phases presented by disordered function and organic change in the various parts of the animal economy, that a just conclusion as to the *fons et origo mali* can be arrived at. Perhaps few classes of disease exemplify the necessity of a wide and mature consideration more than those implicating the rectum, either primarily or secondarily; for the same symptoms will often be found existing under the opposite conditions of cause and effect. Thus, in the female, the symptoms of stricture of the rectum may be induced by the pressure and mechanical obstruction arising from a displaced womb, or some morbid growth or enlargement of that organ, or of the ovaries; the converse is not unfrequently the case, the genito-urinary organs being sympathetically affected by the existence of disease of the rectum; and in the absence of a correct diagnosis, the patient may be considered to be afflicted with leucorrhœa, uterine or urinary disease. In the male, also, there is the same possibility of error in the absence of due consideration. Stone in the bladder often produces symptoms simulating various rectal affections, and in children prolapsus is a very common result. Enlargement of the prostate, stricture of the urethra, and organic and functional affections of the bladder, occasion symptoms that are referable to the rectum, and leading to the supposition that it is the part affected; or the reverse occurs, instances being numerous where prolapsus, fistula, hæmorrhoids, or other affections of the bowel, give rise to the idea that the patient's sufferings depend on disease of the bladder, prostate, or urethra. Nor is it in contiguous parts alone that the reaction of one organ on the other is met with; it is necessary therefore to bear in mind the more remote sympathies induced in the cephalic, thoracic, and abdominal viscera, as evinced by headache, vertigo, impaired vision, palpitation of the heart, gastric distension, pain, and sickness; and deranged secre-

tion from the kidneys, as exhibited by the various urinary deposits.

Formerly some of the affections of the rectum, which in reality are very simple in themselves, and easily relieved, rendered the subjects of them the victims of the most painful and in many cases dangerous operations. But by the advance of surgical science generally, and the study and observation of these particular diseases, even the most painful of them may generally be remedied by medical treatment; and when an operation is necessary for the removal of morbid structure, or for the purpose of inducing a healthy reparative process, it is simple in character, quickly performed, occasioning but a slight amount of pain, and confining the patient for only a very limited period. Thus fistula in ano, which, at a comparatively recent period, was considered among the heaviest afflictions that flesh is heir to, from the barbarous treatment that was then practised and considered necessary, as a consequence of the false notions and erroneous pathological principles that prevailed, and which led to the scooping out of the parts in the track of the fistula, or to the extensive destruction of the surrounding tissues by various escharotics, is now remedied by a slight incision, performed in a few seconds, and not occasioning the loss of more than a few drops of blood. It was only a few years since it was deemed essential for the cure of fissure of the anus to entirely divide the sphincter muscle; but it is now proved that when an incision is required it is not necessary to make it more than a few lines in length, and to extend it no deeper than through the mucous and submucous tissues. In all operations about the anus, the general rule in surgery, that of not removing more of the integument than is necessary, cannot be too forcibly insisted on; for if this is not observed, the patient will be doomed to much inconvenience and misery by the contraction that ensues.

The constitutional origin of these local affections, and their reaction on the general system, when their cause has been extrinsic, must always be borne in mind, for if this be overlooked, our hopes of success in the treatment will often not be realized.

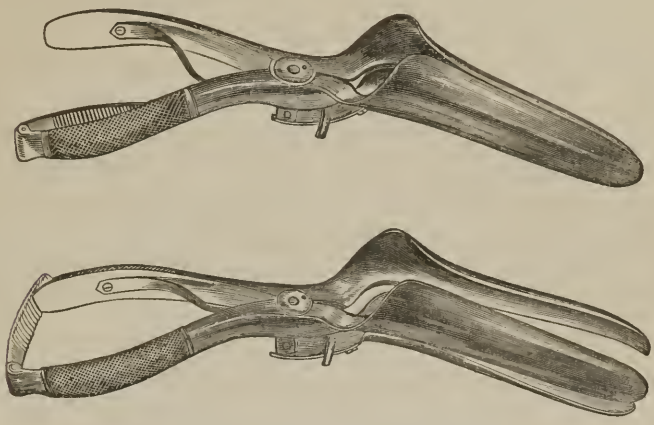
Besides prescribing proper remedies, and giving strict injunctions with regard to diet and exercise, it is advisable that the surgeon should apply the dressings with his own hands; for

though there is no difficulty in the matter, yet it is essential to the comfort and recovery of the patient that they should be accurately and properly adjusted; nurses and attendants, from not thoroughly apprehending the object to be attained, are too apt either to cram and distend the parts with the dressings, or not to approximate them with sufficient nicety; the surgeon should also exhibit the enemata, unless he has some intelligent and trustworthy person on whom he can rely. These matters may appear comparatively trifling; but if they pass unattended to, the treatment, although in other respects skilfully and well directed, will often result in disappointment.

In some morbid conditions of the rectum, great advantage is derived by the use of the speculum for the purpose of examination, and also in performing some operations. In most cases one of the form of the annexed figure will answer the purpose; it is

an old-fashioned instrument, and may be made of polished metal, or of glass silvered, and covered with caoutchouc. Several specula, differing but slightly, have been contrived; some are made with metallic or wooden plugs to fill up the side opening while the instrument is introduced, but the finger will be found a far better substitute; others are furnished with handles fixed or movable, which are worse than useless, being only in the way. Mr. Blaise, of the firm of Philp, Whicker & Blaise, surgical instrument makers, of St. James' Street, has invented a three-bladed speculum, which in some instances will be found exceedingly useful, as by it a surgeon has the power of dilating the bowel, and more fully exposing to view the diseased part when extensive. The instrument which I use is a slight modification of his, being somewhat conical, trumpet-shaped at the mouth, and admitting the introduction of the finger, so as to prevent the mucous membrane being pinched between the blades when they

are closed previous to withdrawing it. The following engravings accurately represent the speculum as seen when closed and when partly open:—



Enemata, in most affections of the rectum, as well as in many other diseases, are productive of the greatest benefit, more effectually accomplishing the object of the physician in removing accumulated excretions than any other means, and saving the stomach and commencement of the intestinal canal from the irritation and nausea which aperient medicines induce. Whatever the form of the instrument, it is important the jet should be flexible, and not—as usually supplied by instrument makers—made of ivory or metal, by which laceration or other injury of the bowel is very readily inflicted. Pumps are objectionable, for the reasons that patients are apt to throw up either too large or too small a quantity of fluid, the necessity of a basin or other receptacle, and the inconvenience of employing both hands. From their simplicity and convenience, I recommend either a ten ounce India-rubber bottle with a stopcock, or a cylindrical reservoir fitted with a piston; the jet is seven or eight inches in length, and being detached, affords the important advantages of great facility of introduction into the bowel; and by means of a plug, its connection with the instrument is most readily effected. When it is intended by enemata to unload the colon of accumulated fecal matter impacted in its sacculi and distending that intestine, a long elastic tube, known as "O'Beirne's tube," should

be passed up the bowel, and the fluid injected by means of a well-made double-action pump. Before using the injecting apparatus it should be filled with fluid, otherwise the air contained will be forced into the patient's bowels, and cause much pain and annoyance; this precaution is highly necessary, for it is astonishing how much suffering will be induced if it is disregarded.

It is stated by all English writers on the subject, that diseases of the rectum prevail almost entirely in the better classes of society; from opportunities I have had, I can vouch that this statement is erroneous, and that they exist among the working classes to an incredible extent; but from certain prejudices and popular opinions they entertain, as well as for other reasons, they seldom seek relief at our hospitals.

CHAPTER I.

IRRITATION AND ITCHING OF THE ANUS.

Itching at the anus is a very common affection, existing more generally as a symptom of constitutional derangement, or of irritation or structural disease in some portion of the alimentary canal than as a substantive disease. It occurs more frequently at or after the meridian of life than at an earlier period, though no age is exempt. Of the several causes inducing this distressing ailment, congestion of the mucous membrane of the rectum and other portions of the alimentary canal is by far the most frequent. Another common cause is the presence of ascarides, or of other entozoa infesting some part of the intestinal tube; it is also occasioned by the accumulation of feces in the rectum and colon; by the improper use of mercurial and other purgatives; by irritation about the neck of the bladder and prostate gland; by derangement of the digestive organs, and a depraved condition of the excretions and secretions, particularly of the liver and kidneys. It may follow the recovery from dysentery, and very generally precedes and accompanies hæmorrhoidal and other affections of the rectum. Females sometimes suffer much from pruritus ani during the period of gestation; and it not unfrequently depends on derangement, or occurs at the cessation of the menstrual function. Errors of diet, particularly the indulgence in highly-seasoned dishes and too great a quantity of wine, will produce it; unwholesome food will also have the same effect; this was illustrated in the case of a professional friend who suffered severely from this affection, induced by indulging his taste for game that had been kept till it had become completely putrid; the disease left him shortly after the shooting season was over; and the following year, being dissuaded from gratifying his appetite for the unsavory food, he was free from the affection, save on

one or two occasions when he could not refrain from partaking of some birds that were particularly high.

Itching of the anus is sometimes accompanied by an eruption of papulæ or tubercles, which may also coexist in other parts of the body; but in the greater number of cases no eruption will be perceptible. The itching is often most distressing on the patient getting warm in bed, and frequently prevents him sleeping till he is completely exhausted.

When the disease is of long standing, and the patient has yielded to the strong incentive to scratch and irritate the part, the skin around the anus will become thickened and furrowed, the furrows assuming a radiated direction diverging from the centre of the anus. They vary in number and length, and, though often deep, are generally free from ulceration if due attention to cleanliness is observed; but should this have been neglected, and irritating secretions have accumulated, inflammation will be induced, followed by excoriation and ulceration.

In the spring of 1854, I attended a married woman, a patient at the Blenheim Street Dispensary, who suffered most severely from a pruriginous condition of the anus and vulva. She was the mother of several children; and when she applied to me, was in the fifth month of pregnancy. From the commencement of gestation she had experienced intolerable itching around the anus and posterior part of the vulva, rendering her life perfectly miserable. The skin, by scratching and irritation, had become rough and indurated, and deeply fissured, but was free from ulceration. In consequence of not being able to sleep at night, and her torments being but little mitigated during the day, her general health was much impaired. The treatment consisted of aperients, tonics with acids, and various local applications; a solution of the nitrate of silver affording most relief. But although by the treatment adopted her sufferings were much diminished, they did not entirely subside till after her confinement, which occurred at the proper period.

Some authors think that a pruriginous state of the anus ought not to be interfered with, as it prevents the accession of more serious diseases to which the individual may be predisposed, and they instance cases in which, after the itching has been relieved by treatment, or subsided spontaneously, death has followed; but they fail to support their views by the evidence of accurate

and minute post-mortem examinations; moreover, their want of knowledge of those obscure and frequent diseases of the heart and minute vessels of the brain capable of causing sudden death, with which we have recently become acquainted through the observations and pathological researches of Dr. Quain,[1] Mr. Paget,[2] and others, into changes of structure, must make us hesitate to receive such inferences as correct; even were it not, as has already been stated, that pruritus ani is more frequently a symptom or an effect of disease of structure or function in some one or other of the viscera than a purely local affection.

In the treatment of this very troublesome and frequently obstinate disease, great patience and perseverance will often be requisite, both on the part of the patient and medical attendant. By the latter it must be borne in mind that the affection is rather a symptom of constitutional derangement than a disease *sui generis;* but often so distressing is it to the patient as wholly to occupy his mind, to the exclusion of that which may be the more important feature of his ailment; hence great care and caution are requisite in ascertaining the cause producing it. In females, when the menstrual function has ceased, or is about to do so, it will be most important to keep the bowels free, to attend to the secretion of the liver, kidneys, and skin, and to direct exercise in the open air to be taken daily. If ascarides in the rectum give rise to the affection, they must be dislodged by such means as are recommended in treating of the subject under the head of foreign bodies in the rectum.[3] If hæmorrhoidal tumors or condylomata exist, they must be removed by excision, unless the hæmorrhoids are internal, in which case the ligature or concentrated nitric acid must be employed. If the digestive and assimilative functions of the patient are feeble, and the constitution is otherwise delicate, a nutritious, but plain diet will be necessary, conjoined with proper exercise, and the administration of alterative, tonic, and chalybeate medicines; but if the contrary be the case, and he has been accustomed to indulge in highly-seasoned

[1] "On Fatty Diseases of the Heart," by R. Quain, M.D., Medico-Chirurgical Transactions, vol. xxxiii.

[2] "On Fatty Degeneration of the Vessels of the Brain," Medical Gazette, New Series, vol. x. p. 229.

[3] Chap. xviii.

dishes, and to partake freely of wine and spirituous liquors, he must be restricted to a vegetable diet, and the quantity of stimuli considerably reduced, if not altogether disallowed. Various remedies have been recommended in this disease, and will be found more or less efficacious according to the circumstances of the case; among them may be mentioned the decoction and infusion of cinchona with nitric or nitro-hydrochloric acid, and the various preparations of iron; the bowels must be acted on by the occasional use of purgatives. When an eruption exists on other parts of the body, five grains of the compound pill of chloride of mercury should be taken at bedtime, or the same quantity of mercury and chalk with hyoscyamus, conium, or extract of poppy; and the compound decoction of sarsaparilla two or three times a day; when the gums become tender, the quantity of mercury must be reduced, or even left off for a short time, as ptyalism to any extent must be avoided. It will be advisable to continue the remedies for a few weeks after the disease has subsided, in order to guard against a relapse.

The due attention to the functions of the skin has been insisted on, and much advantage as well as comfort will be derived from the use of the warm bath every second or third day.

The local remedies that will be found useful are lotions containing acetate of lead with wine of opium, the bicyanide of mercury in bitter-almond mixture, lime water and calomel, or the bichloride of mercury, or a saturated solution of biborate of soda, ointments of lead, zinc, nitrate of mercury, &c.; but that which will frequently be found most serviceable, is the application to the part of a solution of nitrate of silver sufficiently diluted not to produce vesication, but only to excite a slight exfoliation of the skin. It is essentially requisite to bear in mind that local applications must not be adopted to the exclusion of constitutional treatment, but contemporaneously with it. I attended a gentleman connected with a city bank, who suffered most severely from this affection; he had received advice on various occasions, but had not found benefit from the medicines ordered. On making an examination, the thin skin of the anus was observed to be dry and inelastic, and intersected by slight cracks. His general health was deranged by too close application to business. I prescribed a combination of aperient and

tonic medicines, and used a solution of nitrate of silver to the part on three occasions; entire relief followed, and his general health improved. He now takes more exercise, and is quite well. A very distressing and obstinate case of this affection occurred in Mrs. ——, residing at Islington; she had suffered severely some years, and had been attended by several medical men, but experienced no relief from the treatment adopted. The functions of the chylopoietic viscera were greatly deranged; the skin around the anus was much indurated and deeply fissured, the fissures extending within the anal margin. It was several weeks before this patient was relieved; the treatment was constitutional, with local applications of bicyanide of mercury; and to relieve the aching and spasm of the sphincter, I incised that muscle on each side—Dr. Greenhalgh kindly assisting me. I could mention many cases; but the text sufficiently illustrates the nature, causes, and treatment of this annoying and troublesome affection.

CHAPTER II.

INFLAMMATION AND EXCORIATION OF THE ANUS.

Simple inflammation and excoriation of the anus is not of unfrequent occurrence in warm weather, particularly in individuals disposed to obesity. Long-continued walking, horse-exercise, long journeys in carriages with soft and warm seats, often produce it. It may also be a consequence of errors in diet, or indulgence in high living; the too frequent use of large doses of calomel and cathartic medicines will often excite inflammatory action in this region; a vitiated condition of the excretions from the alimentary canal, the irritation of worms, of diarrhœa, and of dysentery, may be the exciting cause, and among the poorer classes they arise from a neglect of cleanliness.

The symptoms will be similar to those of superficial inflammation in other parts; at first slight itching will be experienced, succeeded by a feeling of heat and smarting, accompanied by redness and tumefaction; walking and sitting, by the friction and heat which they cause, will increase the pain.

In directing the remedial means, the exciting cause must be first considered. If the inflammation and excoriation are the result of obesity and excessive exercise, either on foot, horseback, or riding many hours in a carriage, it will be only necessary to wash the parts two or three times a day, to apply powdered oxide of zinc, or hair powder, and to keep a fold of lint or linen between the buttocks; it may sometimes be advisable to enforce the observance of the horizontal position. Enemata will be the best means of keeping the bowels open. Should the cause depend on a depraved state of the excretions, this condition must be remedied by the exhibition of appropriate medicines, small doses of mercury and chalk, with extract of taraxacum, or blue pill with hyoscyamus and extract of colocynth, to be taken at night; and the following morning, Rochelle salts with infusion of senna,

or a bitter tonic infusion; the sulphate of magnesia, dilute sulphuric acid, and the compound infusion of gentian, or infusion of cascarilla, make a good purgative; other similar combinations may be prescribed; the remedies are to be continued until the alvine discharges become healthy. The same local treatment as that previously recommended must be adopted. If dysentery or diarrhœa be the cause, the effect will cease with the subsidence of these diseases. If the abuse of cathartic medicines has set up the disease, it will be only necessary to discontinue them, and to apply some slightly astringent lotion locally, and the effect will be removed. When inflammation and excoriation have been produced by a neglect of cleanliness, the observance of different habits is the first step towards a cure; soap and water must be used several times daily; if the hair around the anus has become matted together by the discharge and filth, forming an incrustation over the excoriated surface, it must be softened by the application of linseed-meal poultices, and the free use of the hip-bath and soap; on no account must it be removed by cutting the hairs, otherwise the stumps left will cause much irritation and distress, until they have again attained a certain length. Some time since I witnessed the misery thus induced in a laboring man, and the excoriation was prevented healing for a considerable time by this thoughtless procedure. When the parts are sufficiently cleansed, poultices, impregnated with opium and a solution of acetate of lead, or lint saturated with lotions of nitrate of silver, sulphate of zinc, or acetate of lead, may be kept to the parts; or ointments of the nitrate of mercury, bichloride of mercury, oxide of zinc, &c., may be applied. The recumbent position must be maintained, and the bowels acted on by cooling laxatives and emollient enemata.

CHAPTER III.

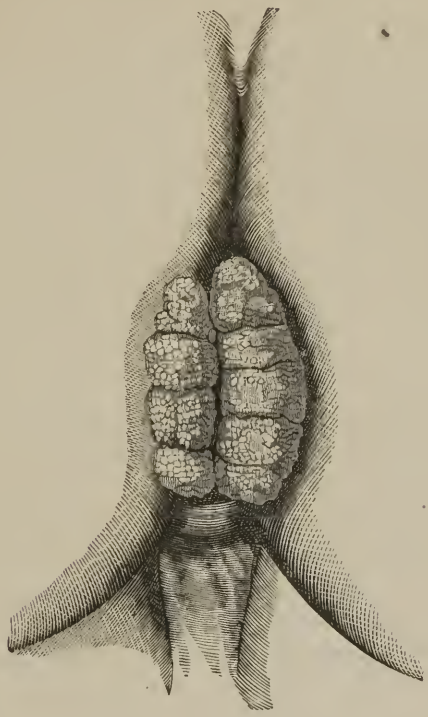
EXCRESCENCES OF THE ANAL REGION.

The fine skin surrounding the anal orifice and the mucous membrane at the verge of the anus are subject to various morbid growths, designated by authors of past ages by the fanciful appellations of scycoma, fici, mariscæ, cristæ, porrus, condylomata, verrucæ, &c. These growths differ much in appearance, consistency, and sensibility, some being acutely painful, whilst others occasion but little suffering.

In one form they will be observed as distinct and separate tumors, with a smooth surface, sometimes slightly lobulated, having a constricted base, and usually flattened in form, owing to their compression between the nates; they vary in size from a pea to that of a chestnut, or larger; and commence as small folds of skin, soft and pliable at first, like the healthy tissue, but, as they increase in size, become of firmer consistence by the development in their interior of a fibro-cellular tissue. Others will be met with partaking of the character of warts, and consisting of clusters of enlarged arborescent papillæ, rising to one or two inches above the surface of the skin, and in some cases entirely surrounding the anus, the aperture of which is hidden in the morbid growth. The appearance of this form of disease is well illustrated by the wood engraving of an aggravated case of warty growth occurring in a boy aged fourteen, a patient at the Blenheim Dispensary.

The most common cause of excrescences of the anal region is some local irritation; thus we frequently meet with them as a complication of several diseases of the rectum attended with discharge; in some individuals the secretion of the perspiratory glands is so copious, that the parts are constantly bedewed with moisture, and irritation ensues. Those persons in whom the glutei muscles are largely developed are liable to these morbid

productions, as a consequence of the irritation produced by the close apposition of the integumental surfaces. The smooth and



lobulated form of excrescence not unfrequently has its origin in the prolongations of integument remaining after the collapsing of external piles, which, taking on a new and increased action, and by a species of abnormal nutrition, become transformed into tumors that may attain a considerable size.

Excrescences of the anal region are more frequent in women than in man, probably owing to the circumstance that, in addition to the exciting causes the latter are subject to, in the female the parts are liable to be irritated by the contact of discharges—simple and specific—from the uterus and vagina. They occur more often in the adolescent of either sex than in the adult, except that form of tumor which has its origin in an external hæmorrhoid.

Besides those growths to which the term excrescence is appli-

cable, tumors of various kinds occur in this locality; they are more prevalent among the inhabitants of hot countries than in Europe, and in them also attain a large size; but this may be owing to their not coming under surgical observation till an advanced period of their existence. Of the several forms of tumors, the fibrous is the most frequent. Mr. Howell, of Clapton, had a patient under his care with a fibrous tumor which had reached unusual dimensions; it was excised, and weighed upwards of half a pound; the tumor was pendulous, being attached to the margin of the anus by a narrow neck, and was composed of fibrous tissue arranged in several lobes. There was an ulcer on its surface, produced, no doubt, by pressure in sitting and friction against the dress. This tumor had been seven years in forming.

In addition to the pain experienced in the morbid growths themselves, their presence increases the irritation in which they had their origin, and the skin around becomes excoriated and fissured, producing great smarting; or, if the integument remains intact, the patient will be tormented with intolerable itching, generally worse at night, and interfering seriously with his rest; neither are the effects always confined to the part; pains in the hips, thighs, and sacral regions being experienced, and also derangement of the bowels. Mr. Mayo[1] mentions the following case, and similar instances have come under my own observation:—

A woman, æt. forty-eight, was under Dr. Watson's care, in Middlesex Hospital. She had been suffering for several years with pain and uneasiness, extending from the anus to the loins, and round the lower part of the belly, aggravated when the bowels acted, which were generally in a disturbed state, being either relaxed or constipated. All these symptoms depended upon two large thick condylomata, one on each side of the anus. I removed these tumors with a scalpel; the surface healed very quickly, and the patient was free from all the distress she had previously experienced.

When the anus is surrounded by warty growths, in addition to the symptoms already described, the patient will be subject to hemorrhage, and an exceedingly fetid and copious secretion.

[1] "Observations on Injuries and Diseases of the Rectum," by Herbert Mayo, p. 98.

In the treatment of these affections at their commencement no operation is necessary, as the excrescences, if small and not much indurated, will generally disappear by the application of a lotion of the bichloride of mercury, in proportion of a grain of the salt to an ounce of water; should they be attended with itching, a solution of the nitrate of silver, or a lotion of the bicyanide of mercury in bitter-almond mixture, will usually succeed in allaying it. But when the growths are large and dense, excision is the only effective and proper plan of treatment; a probe-pointed bistoury or scalpel is much the more surgical instrument than the scissors, which are commonly recommended to be used; with the knife the incisions can be made more rapidly and with greater precision, and, what is of more consequence, with much less pain to the patient. The operation may be performed either with the patient lying on his side, or kneeling and leaning over the back of a chair. Each tumor is to be seized with a pair of dressing-forceps, and removed close to its base, but none of the surrounding integument is to be taken away. In whatever position the patient is, the surgeon should remove the lower growths first, so that the bleeding may not interfere with his view of the others. If the anus is surrounded by warty excrescences, a composition bougie may be introduced into the intestine, and then, with a circular sweep of the knife, the whole growth is at once removed. It is seldom that any vessels will require ligature; however, should any present, they are easily secured; a considerable oozing of blood will sometimes take place from the incised surface, which can always be readily suppressed by a well-arranged pad pressed firmly to the part by a T bandage. Provided there is evidence in the individual of a strong predisposition to the formation of these growths, nitrate of silver may be applied after their removal, in order to modify the vitality of the part, and check any tendency to reproduction; during cicatrization, a lotion containing sulphate of zinc, acetate of lead, or alum, should be used; and the patient should be directed to observe great cleanliness. The ligature and escharotics have been recommended in the treatment of these affections; but recourse should not be had to them, as they occasion great pain, and do not effect the desired object. While house-surgeon at University College Hospital, a patient, aged eighteen, was under my charge, with a

warty growth surrounding the anus between two and three inches in diameter, and rising more than an inch above the integument. As he would not at first submit to an operation, astringent and escharotic applications were made use of, but without much effect. I afterwards attempted its destruction by ligature, but, owing to its density, only partially succeeded. In similar cases I have since removed the disease with the knife.

The several kinds of tumors occurring in this region are to be removed by excision.

The following cases will be sufficient, in illustration of the subject:—

Condylomata from leucorrhœa.

Mrs. ——, æt. thirty-five, the mother of several children, had suffered from leucorrhœa for more than two years, the discharge being so profuse as to render her constantly wet and uncomfortable; lumps formed on the labia and about the anus, gradually increasing in size; the adjacent parts became excoriated and painful. Before coming under my care she had taken various medicines, and used lotions and ointments without benefit. It being evident that the morbid growths on the external parts arose from irritation, produced by the discharge from the vagina, an examination was made with a speculum, and ulceration of the os uteri discovered, which was also congested and enlarged; there was profuse muco-purulent secretion from the uterus and vagina.

The treatment adopted was leeches and the application of nitrate of silver, and afterwards alum injections; cicatrization of the ulcerated surface took place, and a healthy condition of the uterus and vagina restored. When the vaginal discharge had diminished, the condylomata were removed by excision, and a fold of lint, saturated with lead lotion, applied: the wounds healed in a few days.

Condylomata from leucorrhœa.

M. A. P., æt. twenty-six, single, applied at the Blenheim Dispensary, May 24th, 1853. She had been for some time subject to vaginal leucorrhœa, the discharge being very profuse. Tumors formed about the anus: they were not painful at first, but latterly she had experienced much smarting and discomfort. She was chlorotic; her eyes were dull; skin, gums, lips, and tongue pale; arms flabby; menstruation irregular, and almost devoid of color. Mild purgatives, chalybeates, and vaginal injections were prescribed; the condylomata were excised, and a slightly astringent

lotion applied; ablutions with soap and water were used night and morning: the local disease was cured, and in a few weeks her general health had greatly improved.

Condylomata from irritation by contact of opposed cutaneous surfaces.

W. G., æt. thirty-one, very stout, occupation sedentary, being engaged in a merchant's office in the city. Perspires freely; has always suffered from excoriation between the buttocks in warm weather; some excrescences had formed around the anus; he had been told they were external piles, and directed to use gall ointment, and to take sulphur and treacle; he experienced no relief, and the tumors increased in size, attended with great smarting and pain. His bowels were regular, and, in other respects, he enjoyed good health. On examination, three condylomata on the verge of the anus presented; they were dense, and about the size of beans; the surrounding skin was excoriated, and bedewed with a copious secretion. I excised the tumors, and ordered a fold of lint, saturated in lead lotion, to be kept applied till the parts had healed. I also advised ablution, with soap and water, night and morning, and keeping the buttocks separated by a single fold of lint between them. The treatment adopted had the effect in a few days of removing all the discomfort he had previously suffered.

Condylomata resulting from the folds of integument left by the collapsing of external hæmorrhoids.

The late Dr. Ashwell brought to my house the husband of a patient of his, the Rev. Mr. ——, who wished to consult me respecting an affection from which he had suffered for some years. This gentleman was stout, with the muscular system largely developed. He informed me he had for a long time experienced the most intolerable itching about the anus, and was also annoyed by a constant watery discharge: he had consulted several surgeons; various lotions had been prescribed, and the solid nitrate of silver applied twice, which caused him most severe pain, without any beneficial effect. Many years previously he had been the subject of hæmorrhoids, and had had several large piles form at the verge of the anus; when these subsided, loose folds of skin remained, which occasioned him no inconvenience for some time, but at length he began to experience the symptoms which now caused him such severe annoyance. On making an examination, I observed the skin around the anus, and for about three inches posteriorly, inflamed and cracked, and bedewed with a serous secretion; three dense condylomata, the size of the shell of an

almond, were connected with the anal margin, the whole of which was indurated, but not contracted. He was informed that excision of the tumors was the only means of freeing him of the disease, and he readily consented to the operation. Being somewhat affected with flatulence, and the bowels not acting freely, he was directed to take three grains of blue pill and a grain of ipecacuanha every night, and a draught, twice a day, composed of infusion of cinchona, infusion of senna, tartrate of potash, with some aromatic tinctures; by these means the bowels were freely acted on, and on the fourth day I removed the growths, cutting them off with a probe-pointed bistoury; Dr. Ashwell was present and very kindly assisted me. No ligatures were required, a compress, retained firmly by a T bandage, restraining the little hemorrhage that ensued. On the following day the wounds were dressed with oxide of zinc and spermaceti ointment, and in a week were quite healed, as well as the cracks in the surrounding integument; a lotion of the bichloride of mercury in bitter-almond mixture was directed to be applied, and in a short time all induration of the anus had disappeared.

It is evident these growths had their origin in the folds of skin left by the collapsing of the external piles; and had the treatment hereinafter advocated been adopted, of incising external hæmorrhoidal tumors when large, this gentleman would have escaped the sufferings he subsequently experienced.

Condylomata of large size, attended by severe symptoms.

A gentleman, æt. fifty-four, residing in one of the principal squares at the West End, applied to me in May, 1856. He is very stout, and plethoric, rides much on horseback, and subject to attacks of gout. Three years before applying to me, and shortly after an attack of gout, he lost a considerable quantity of blood per anum; subsequently had a mucous discharge, and excrescences formed at the margin of the anus, which gradually increased in size. He experienced intolerable irritation in the part, aching down the thighs, and at stool had severe smarting. An examination showed the anus surrounded by four large, dense condylomata; the surface of one was ulcerated and acutely painful to the touch; the integument around was of a purple color, and bedewed with a copious secretion; the margins of the anus were indurated. No internal hæmorrhoids existed, but the mucous membrane of the rectum was congested, his tongue was coated, eyes dull, sclerotic conjunctivæ yellow.

Ordered some blue pill with ipecacuanha at bedtime, and a cathartic draught in the morning; and he was directed to use ablutions with soap and water locally night and morning, and afterwards to apply powdered starch. The medicines were

repeated for four consecutive days, and on May 22d, with the assistance of Mr. Hulme, I excised the tumors with a bistoury. The hemorrhage was restrained by a pad of lint secured by a T bandage. He remained on the sofa two days, experiencing little inconvenience. In six days the wounds were healed, but the induration around the anus remaining, a lotion containing the bichloride of mercury was prescribed, and a mixture of the compound infusion of gentian with iodide of potash and bicarbonate of potash.

By the 21st June the induration had disappeared, and his general health greatly improved. This gentleman has consulted me occasionally up to the present time: he has no symptom of return of the local disease, and by a little proper treatment he has had fewer attacks of gout, and now enjoys greatly improved health.

CHAPTER IV.

CONTRACTION OF THE ANUS.

CONTRACTION of the anus is productive of serious inconvenience and distress to the patient: it is not a common affection at the present day, but when it was the custom to treat fistula in ano by extensive incisions, to scoop out the sinus and surrounding indurated parts, or to destroy the tissues extensively with escharotics, it must have been a very general result of such surgical interference. Mr. Pott, deprecating De la Faye's treatment of fistula, as causing contraction of the anus, says:[1] "If M. De la Faye had ever, in his own person, had the misfortune to experience the inconvenience arising from loss of the skin near to the fundament, or had he attended to that which it produces to those who, either from choice or necessity, ride or walk much, I am inclined to believe he would have been more sparing of it."

M. De la Faye himself was not insensible of the evil resulting from his plan of treatment, and to guard against it advised the introduction of tents; the following are his words: "Lorsqu'on a coupé dans l'opération une portion considérable du bord de l'anus, et que les chairs commencent à remplir le vuide, il faut mettre dans l'ouverture de cette partie une tente, un peu courte, qui en empêchant le rétrécissement lui conserve son diamètre," but which it will often do, in spite of all the tents in the world.

The causes producing contraction of the anus are, loss of substance by ulceration, or by wounds, either accidental or caused by surgical operations. In the chapter on piles their excision is alluded to as a cause of this condition of the anus; and I may here repeat, that the surgeon, in removing external piles, cannot be too careful not to take away more of the skin than is abso-

[1] "The Chirurgical Works of Percival Pott," edited by James Earle, 1790, vol. iii. p. 133.

lutely necessary; and he should also avoid an error I have several times seen committed, that of excising the œdematous ring of integument and cellular tissue around the anus, caused by irritation in the rectum, and very generally accompanying inflamed internal hæmorrhoids. Dr. Colles[1] mentions a case where, for the purpose of extirpating warts, a ring of the skin at the verge of the anus had been cut away along with these excrescences, the condition of the patient was rendered truly miserable. Mr. M'Coy[2] adds another illustration of the evil effects of improperly removing the integument of the anus. He says: "I saw a gentleman who had been operated on four years before by an eminent surgeon, and so small and rigid had the opening of the anus become, that no solid larger than a pea could be passed from the bowels, and with the miserable prospect of its gradually becoming still smaller." Contraction also results from inflammatory action, inducing infiltration of lymph in the areolar tissue of the anus, or effusion of the same material on the surface of the mucous membrane, which becoming organized, forms false membranes and filamentous bands, reducing the capacity of the opening, and interfering with its power of dilatation.

The matter of syphilis and gonorrhœa coming in contact with the anus, in those who are regardless of cleanliness, produces a form of contraction first described by Mr. White,[3] as follows: "Not unfrequently a contracted state of the rectum occurs as a consequence of the venereal disease. When the disorder proceeds from this cause, it generally commences with an appearance either of ulceration or excrescence about the verge of the anus. The sphincter ani becomes gradually contracted, and the disease extending upwards within the rectum, a considerable thickening and induration of the coats of the intestine take place, which produce great irregularity and contraction of the passage. Sometimes there is a continued line of contraction from the anus, as far as the finger can reach, then terminating in a kind of cartilaginous border, the inner membrane having a thickened and con-

[1] "Dublin Hospital Reports," vol. v. p. 154.

[2] "Lectures on the Theory and Practice of Surgery," by Abraham Colles, M. D., see note vol. ii. p. 115.

[3] "Observations on Strictures of the Rectum and other Affections," by W. White, Bath, 1820, p. 18.

densed feel. There is a discharge indicating a diseased, if not ulcerated, state of the inner membrane, above the contracted portion of the intestine. All the cases which I have hitherto met with of this nature have occurred in females, and they have uniformly proved incurable when attended with the structural derangement just described."

Since the publication of the first edition of this book, I have met with two cases of induration and contraction of the anus arising from venereal disease; both patients were females. The affection differed from that described by Mr. White in not implicating the rectum: the disease yielded in both cases to a steady perseverance in the use of the iodide of mercury and the iodide of potassium.

Contraction of the anus is sometimes congenital: if the opening is not very small, it may not attract attention in the early period of infancy, from the evacuations being fluid, and passing without much difficulty.

The symptoms in this affection are very similar to those of contraction of some portion of the canal above the anus: the pain will not be so severe as in stricture of the rectum, neither will there be the constant purulent discharge which attends the latter disease. The feces will be passed with difficulty and pain; they will be compressed and figured, and, if they are solid, a sense of bulging out of the anus and perineum will be experienced during their passage. By the sufferings occasioned, the patient is often induced to postpone the calls of nature; but generally has reason to repent doing so, for the feces, accumulating and becoming hard, considerably increase the pain and difficulty in defecating. In such a case it is no infrequent occurrence for the mucous membrane to be lacerated longitudinally by the passage of the stool, constituting fissure of the anus: spasmodic contraction of the sphincter will then be superadded, attended with violent aching, for a longer or shorter interval, whenever the bowels act.

Those who suffer from this condition of the anus generally conceive they have stricture of the rectum; however, we have the satisfaction of being able to assure the patient that the disease is of a much less serious nature, and we shall further be able to promise not only a speedy but effectual cure.

Digital examination causes considerable pain, which will be greater if fissure coexists, but by it we can ascertain the nature and extent of the disease; if the patient is very nervous, or very sensitive to pain, chloroform may be inhaled previously to the examination being made.

The treatment must be both medical and surgical. If inflammatory action be present, it must be subdued by topical bloodletting, hot fomentations, and cataplasms. The bowels must in all cases be kept loose by laxatives, as castor oil, confection of senna, &c.; great ease will be afforded by emollient enemata. The diet must be very moderate in quantity, and unstimulating in quality. The anus must be dilated by the introduction of bougies, and must be effected with much gentleness, for more pain will be experienced in this disease than in stricture of the rectum, in consequence of the greater sensibility of the integument than of the mucous membrane. When the instrument is used, the patient should rest on a couch or bed, with his knees drawn up. The better time for passing the bougie will be shortly before the usual period of the bowels acting. Ablutions with soap and water, twice or thrice a day, will add to the patient's comfort, and lessen the local irritation. If much pain and nervous excitement be occasioned, anodynes may be required, which may be administered either by the mouth, or as suppositories, or enemata.

Congenital contraction of the anus cured by dilatation.

Some years since I saw, in connection with the late Mr. Morton, a child, about two years old, with congenital contraction of the anus, which would not admit a larger instrument than a number eleven urethral bougie; the belly was tumid, and the general health impaired; dilatation was had recourse to: in a short time the bowels could be entirely relieved, and, with the aid of tonics, the patient progressed favorably.

Contraction of the anus following the removal of external piles.

W. W., æt. thirty-nine, a clerk in a merchant's office, had suffered some years from internal and external piles; two years previously to my seeing him he had the external ones removed; he described the wounds caused by the operation as being large, and that they were some time healing; after this he felt free from all his previous discomfort, but, at length, found a gradually in-

creasing difficulty in passing his motions, and great straining was necessary to effect their expulsion: he also observed the stools were small and contracted when they were solid. To lessen the pain he suffered, he had frequent recourse to castor oil.

On examination the anus presented several cicatrices, the radiating folds of the integument were effaced, and the anus would only admit the tip of the little finger. The general health had suffered by the pain and the anxiety the affection occasioned; the plan of treatment was that which has been described, and a rapid recovery ensued.

Contraction of the anus following an improperly performed operation, complicated with fissure.

J. T., a tailor, had suffered from piles, and had been operated on: he now complained of difficulty in defecating, attended with severe smarting, followed by aching. The history and the condition of the patient were similar to those described in the preceding case, except that there was fissure in conjunction with the contracted state of the anus. Bougies were used smeared with an ointment of gray powder and spermaceti, and extract of belladonna, applied on lint, to relieve the painful contraction of the sphincter. The fissure healed without the necessity of making any incision.

I have not met with a case of contraction of the anus and rectum as described by Mr. White. Dr. Bushe[1] relates the following case, which he considers syphilitic:—

An officer, who had been engaged in many a well-contested field, and had endured great fatigue, and many privations while campaigning, became the subject, in succession, of hepatitis, dysentery, ague, and dyspepsia. By proper medical treatment, and great attention on his own part, he improved much, but never regained his former state of health. In 1824 he contracted an ulcer on his penis, which healed with great difficulty, and was soon followed by secondary symptoms, under which his health rapidly deteriorated, and when I saw him, in the summer of 1826, he was greatly emaciated, with nodes on his bones, an eruption on his skin, chronic iritis, and induration, thickening and partial ulceration of the marginal integument and mucous membrane of the anus. He had suffered most annoyance from this last affection, having much purulent discharge, constant tenesmus, and excruciating torture both at and after stool. Leeches, fomenta-

[1] "Treatise on the Rectum and Anus," by George Bushe, M. D., New York, 1837, pp. 260, 261.

tions, saturnine and opiate poultices, the introduction of meshes of lint besmeared with lard and extract of belladonna, as well as emollient and anodyne lavements, were tried in vain, at the same time that sarsaparilla and oxymuriate of mercury were administered.

This poor fellow sank in a few months, and, on dissection, about an inch and a quarter of the extremity of the gut was found diseased.

Two cases have come under my observation of contraction of the anus by infiltration of lymph: both had been preceded by dysenteric symptoms: and after their subsidence, mild mercurials and iodide of potassium were prescribed, and dilatation had recourse to with the happiest effect.

CHAPTER V.

FISSURE OF THE ANUS AND THE LOWER PART OF THE RECTUM.

This disease, of frequent occurrence, and giving rise to more uneasiness and suffering, in proportion to the pathological condition of the structures involved, than perhaps any other disease to which the human frame is liable, has met with very little consideration from the majority of surgical writers, and is even unnoticed in most systematic works on surgery. Although the distinguished surgeon, M. Boyer, in the tenth volume of his *Traité des Maladies Chirurgicales,* published in 1825, well described this malady, in this country it has not received that attention which the subject demands; and there is strong reason to believe the diagnosis and treatment are not so familiarly known as might be desired—a fact to be regretted the more, as little difficulty presents itself in either.

Fissure of the anus usually occurs during the middle period of life. Dr. Bushe[1] has not observed this affection before the age of eighteen, or later than sixty-nine years of age. Professor Miller[2] says, "they" (fissures) "have been observed in children at the breast;" but this must be of rare occurrence, the predisposing and exciting causes seldom existing till after puberty. One of the latest writers on diseases of the rectum objects to the term fissure, and speaks of the affection as "irritable ulcer of the rectum:" although, in many instances, when the surgeon is first consulted, it may present the form of an oblong ulcer, yet I have no hesitation in saying the primary condition was essentially a fissure or crack of the mucous membrane.

In the majority of cases, the lesion is confined to the mucous membrane only, but occasionally extends to the submucous

[1] Op. cit., p. 100.

[2] "Practice of Surgery," by James Miller, F. R. S. E., Edinburgh, 1852, p. 380.

cellular tissue, or even to the muscular fibres of the sphincter: the inferior extremity of the fissure is usually immediately within the margin of the external sphincter, or implicates the skin at the margin to a slight extent, but is not unfrequently situated higher up. A fissure may exist on either side, or perhaps on both sides of the bowel: it most frequently occurs posteriorly, and more rarely anteriorly. If an examination is made early in the disease, the fissure has the same appearance as the crack that occurs in the lip during the decline of catarrh; but it soon degenerates into an ulcer, in the same manner as wounds of other parts that do not heal readily, and will be most commonly observed to be about an eighth of an inch in width, and from a quarter of an inch in length. At first the edges are sharp, and the surface florid, but after the disease has existed for some time, the former become indurated and raised, and the surface pulpy and ash colored; the surrounding membrane may be inflamed, and its surface rendered friable, or the ulcerative process may extend, and an ulcer be formed, varying in size from a fourpenny-piece to that of a shilling.

The symptoms in the early stage of this disease are not generally severe, and are only experienced while at stool, when, at some point or other, there will be smarting of greater or less severity, or perhaps only a slight stinging or pricking sensation may be felt; if the disease is allowed to progress, the smarting during the act of defecation will be greatly increased, or the pain may be burning or lancinating, followed by excruciating aching and throbbing, with violent spasmodic contraction of the sphincter muscle, continuing from half an hour to several hours.

The stools, when solid, will be streaked with purulent discharge, and slightly with blood, and when more soft will be figured and of small size, leading the inexperienced to imagine stricture of the rectum to be the cause of the sufferings endured: charlatans also have availed themselves of the latter symptoms to delude their victims into the belief of the existence of a more serious malady. The disease being fully established, the pain will be induced by sneezing, coughing, forced respiration, and by micturition; and so violent does the agony become, that individuals thus afflicted even avoid taking sufficiency of nourishment, in order to lessen the quantity of feces: they also in their dread postpone

the calls of nature, but only with the effect of aggravating their torments. Sitting is painful; and in order to protect the anus from pressure, the patient rests on one hip or on a corner of a chair, or he may be compelled to remain recumbent. Partaking of highly-seasoned dishes and fermented liquors will always involve the penalty of increase of pain: in females, the pain will also be increased during the menstrual period. From nervous irritation, pains are often felt in other parts, simulating sciatica, or rheumatism: the urinary organs are also liable to be sympathetically deranged, and thus the attention may be diverted from the real seat of disease.

It is stated women are more subject to this affection than men. I have observed it frequently in both sexes; and am unable to say that the one is more obnoxious to it than the other: want of proper exercise certainly predisposes to it. Women are sedentary both from habit and the usages of society: in them, also, constipation, one of the exciting causes, is frequent, partly arising from their habitually neglecting to obey the calls of nature, which for a time they do with less inconvenience, in consequence of the greater capacity of the pelvic cavity than in the male, but thereby laying the foundation of protracted or permanent ailment: men are sedentary from the various occupations in the affairs of life; and among the working classes, many are compelled by the nature of their business to maintain the sitting posture for a number of hours consecutively, and in these all diseases of the rectum and anus are extremely prevalent.

The predisposing causes are constriction of the anal orifice, either from spasmodic action of the sphincter, occurring from intestinal irritation produced by the ingesta, or a vitiated and acrid condition of the secretions, or from the cicatrization of wounds after surgical operations, accidental or specific ulcers, or injuries to the part. Hæmorrhoids are frequently the predisposing cause, and a complication of this affection: they narrow the outlet, and by the repeated attacks of inflammation to which they are subject, the surrounding tissue loses its elasticity, and is rendered friable and is easily torn or broken. The exciting causes are constipation, induration of the fecal matter, and the violent action of the expulsive muscles requisite for its evacuation.

The examination necessary for ascertaining the nature and extent of the disease is always attended with some pain, especially if roughly made. So acute are the sufferings in some people as to render the administration of chloroform very advisable.

As before stated, the fibres of the superficial sphincter are strongly and spasmodically contracted; and the fundament, instead of presenting a hollow cone, has rather the appearance of a flat surface with a minute perforation in the centre, marking the anal orifice; and is so characteristic of the affection, that, when this condition exists, and the patient complains of aching after defecation, there can be little doubt as to the nature of the disease. But in practice as nothing must be taken for granted, and as some complication may also exist, it is absolutely requisite to make an examination before giving an opinion or determining as to the treatment to be adopted. The speculum ani is seldom required by those endowed with delicacy of the sense of touch and a knowledge of rectal diseases, except in cases where there is reason to suspect the fissure has taken on the ulcerative process, then by its use an accurate knowledge of the extent of the diseased surface and its condition will be obtained. In the greater number of instances the possession of the "*tactus eruditus*" will enable the surgeon to form a correct diagnosis without the aid of the speculum, and thus save the patient much pain. By the careful and gentle introduction of the finger, the indurated margins of the fissure will be felt forming an elevated ridge palpable to the touch in proportion to the time the disease has existed and the consequent induration. Should the fissure be situated deeply in the columnar folds of the bowel, and examination be made at an early period of the disease, the surgeon may not be able readily to detect it by his finger, but he will become acquainted with its locality by the patient complaining of pain at some one particular point.

My experience fully justifies me in stating that in the majority of recent cases it is not necessary to have recourse to an operation, although some of high authority in the profession assert that incision is the only effectual remedy, and that all sorts of applications, soothing and irritating, are unavailing.

If the fissure exists at the verge of the anus, and is of recent origin, the patient must be directed to have recourse to ablution

with soap and water, night and morning: after evacuating the contents of the bowels, half a pint of cold or tepid water should be thrown up; and when this has been ejected, a small piece of lint, saturated with a lotion of a solution of lead with opium, or one of similar properties, must be kept applied to the part. When there is much spasm of the sphincter, the extract of belladonna, in the proportion of a drachm of the extract to an ounce of spermaceti ointment, or ointment of acetate of lead, is commonly successful in relieving this distressing symptom. Belladonna has been employed in combating pain and spasm in diseases of the rectum by many eminent surgeons for a number of years. Dr. Copland, in his valuable work, the *Dictionary of Practical Medicine*, appends a note, stating that Dr. Graham, of Sterling, was the first to employ this medicine in diseases of the rectum and anus. On referring to the first volume of the *Edinburgh Medical Commentaries* (A. D. 1774). p. 419, I find he applied it to the perineum, for a solid tumor situate in the recto-vaginal septum, and states he has observed great advantage to accrue in using it in diseases of the rectum and anus. Sir Benjamin Brodie formerly prescribed it in the form of a suppository; but from the serious symptoms sometimes produced by its influence on the brain, he abandoned its employment.

At the same time that local treatment is being practised, it will be necessary to attend to the state of the secretions and excretions, and to correct any error in the patient's habits and manner of living.

If, after a fair trial of the simple means that have been recommended, the fissure does not heal, but, on the contrary, the edges become indurated, and the surface pulpy and indolent, the free application of the nitrate of silver, at intervals of a few days, for two or three times, will generally induce a healthy reparative action in the part, though often at the cost of much pain to the patient. The use of belladonna ointment and enemata after stool must be continued.

But cases will occur in which both these plans fail, and it will be necessary to have recourse to a modification of the operation recommended by M. Boyer, namely, incision through the ulcer; but it need not be carried through the sphincter, as he advised, though since his time, and even at present, the greater number of

surgeons divide the parts to the extent he recommended. That this improvement in the surgical treatment of fissure of the rectum should remain so little known is somewhat surprising, as both Sir B. Brodie, in his *Lectures*, published in 1836, and Mr. Syme, in his work *On the Rectum*, directed the attention of the profession to the fact of a very limited incision only being necessary to its cure.[1] The operation may be performed in two ways, either by cutting from within outwards, or without inwards. In either mode the patient must rest on his side, with his knees drawn up and the buttocks projecting over the edges of a sofa or bed, or he may lean over a table or back of a chair. For the purpose of cutting from within outwards—the plan hitherto generally adopted—a straight probe-pointed knife, of the shape and size of the figure here given, will be most useful; it is made thicker at the back than an ordinary bistoury, by which a ridge or button on the end is rendered unnecessary. The forefinger, previously oiled, being introduced into the rectum, the knife must be pressed flat upon it till the point reaches the upper margin of the fissure or ulcer, when its edge must be turned, and an incision made through the mucous membrane, without extending it through the other structures. The other mode of making the incision is that advocated by Mr. Syme, and is performed by transfixing the ulcer beneath its base with a small, sharp-pointed curved bistoury, and cutting inwards through its centre; the opposite side of the bowel must be protected by the introduction of the finger, as previously directed. Having on several occasions wounded myself, I find that in dividing the ulcer inwards from without, the better plan is to introduce the speculum, and to cut into the open side. In operating in this affection, as well as in many others, the surgeon will experience great advantage if he is able to use the knife with either hand.

When the disease is situated in the anterior or posterior portions of the rectum, no incision should be extended beyond the

[1] Sir B. Brodie informed the author, that this modification of M. Boyer's operation was introduced by the late Mr. Copeland.

mucous membrane in either direction, for the reason that wounds towards the coccyx split and separate the fibres of the external sphincter only, and are difficult to heal, while anatomical considerations will deter us from using the knife anteriorly; in the male, from the bulb of the urethra being in close proximity, and in the female the shortness of the perineum, and the knowledge that division of the anterior fibres of the sphincter in them is so frequently followed by incontinence of feces.

The following cases illustrate the several phases of this affection:—

Fissure of the anus from constipation.

G. C., æt. thirty-one, a saddler, became an out-patient under my care at University College Hospital, 1845. From the nature of his business he sat the whole day, and felt too tired on leaving work to take any exercise; he suffered from dyspepsia and constipation, the bowels not acting oftener than every second or third day: he was frequently attacked with giddiness and singing in the head; his tongue was coated and large; defecation was always attended with violent straining. Eight days previously to his applying at the hospital, while at stool, and making violent expulsive efforts, he felt something give way, and a smarting as the feces passed; he also observed some blood; afterwards, each time the bowels were moved, he experienced pain and aching, the latter being very severe. On examination of the anus a slight fissure was observed, florid, and very painful when touched. Ordered to apply a poultice at bedtime, and to take an ounce and a half of castor oil in the morning.

The next day the bowels were freely moved, attended with pain; the fissure was less inflamed: he was ordered to repeat the oil, in less quantity every morning, and to keep a small piece of lint, smeared with an ointment of oxide of zinc with belladonna, closely applied within the margin of the anus. By continuing this plan, and using ablutions night and morning, in ten days he was quite well.

Fissure: intense suffering for four months cured by incision.

Mrs. K——, delicate, the mother of several children, had suffered from external hæmorrhoids during her pregnancies, and had always had great difficulty in keeping the bowels open. Soon after her last confinement she experienced smarting at the anus when at the closet, followed in a short time by intense agony: various purgative medicines had been prescribed, but without

affording the slightest relief. Occasionally her linen would be slightly stained with blood and pus, particularly after passing a hard stool. When I saw her—Nov. 1845—she had for some weeks been unable to leave the sofa, as the pain came on if she walked about, or even stood for a short time; sneezing, or any slight exertion, also produced it; her health was very much impaired, and she was in a state of great nervousness and despondency. Making an examination, a small oval ulcer was perceived, extending half an inch upwards from the anal margin rather posteriorly on the left side: the sphincter was thrown into violent contraction by the examination: the colon could be felt through the abdominal parietes distended with feces. To free the bowels of their accumulated contents, enemata were injected by O'Beirne's tube, and moderate doses of castor oil were prescribed.

My friend, Mr. Morton, saw this patient with me, and we agreed that an incision should be made through the ulcer, which I performed by passing a probe-pointed knife on the forefinger introduced into the bowel; a few meshes of lint spread with the spermaceti ointment and belladonna were inserted into the wound. The dressings were continued, the bowels kept easy, and the local affection was speedily cured. She afterwards took a combination of tonics and aperients, by which a regular state of the bowels was induced, and her health became perfectly restored.

Fissure of the anus cured by local applications.

Mr. ——, æt. thirty-four, of nervous temperament, has suffered for some years from indigestion and irregularity of the bowels. being sometimes costive and at other times affected with diarrhœa. Has consulted several medical men, but never pursued any plan of treatment suggested. He applied to me early in 1851, suffering from indigestion attended with pain at the epigastrium, flatulence, excessive nervousness, and inability to rest at night. On microscopic examination of the urine, it was found to contain numerous crystals of oxalate of lime: he took mild aperients and bitter infusions with nitric and nitro-hydrochloric acids. He persevered in the remedies, and his health greatly improved. In the beginning of June in the same year he was slightly troubled with an external pile: under ordinary treatment all inconvenience subsided in a few days, a small pendulous flap of skin on the anterior margin of the anus remaining. On the 24th of the same month I was sent for in great haste, and found him suffering intense pain at the anus, extending up the hollow of the sacrum; pulse quick and irritable, tongue slightly furred, skin somewhat hotter and drier than natural, countenance anxious: he had experienced slight pain for two or three days, and was in a state of great alarm about himself, imagining he had cancer of the rectum com-

mencing, having a short time previously lost a sister by that disease. Examination revealed a fissure of the posterior part of the anus, about an eighth of an inch broad, and half an inch in length. An enema of four ounces of decoction of barley and sixty minims of laudanum was administered at once, with the effect of relieving the pain: three grains of gray powder, and five grains of Dover's powder, were taken at bedtime, and an aperient draught in the morning. The following day the bowels acted several times, the smarting and aching were less; the latter was relieved by an enema containing thirty minims of the tincture of opium.

A small strip of lint impregnated with a lotion containing sulphate of zinc and tincture of opium, was applied within the margin of the anus, and renewed three times a day. The bowels were kept open by laxatives, and he took a mild tonic with alkalies. In nine days he had completely recovered.

Fissure and hæmorrhoids inducing the idea of the existence of stricture of the rectum.

Mrs. M——, æt. thirty-seven, married, the mother of four children, has suffered from hæmorrhoids for some years, particularly during pregnancy; she consulted me in consequence of fearing she had stricture of the rectum. She had for some time previously experienced considerable pain at the time of defecation, which she described as of a cutting character, resolving itself into severe aching, frequently so agonizing as to compel her to go to bed. She tried the local application of cold and hot water, experiencing slight relief from the latter. The symptoms which added greatly to her alarm, and which she had been told indicated stricture of the rectum, were a reduction in size, and contortion of the evacuations when they were at all solid. On making an examination, I found two external piles, and the buttocks being divaricated, a fissure was also perceived passing upwards between the piles; the sphincter ani was strongly contracted. The bowels having been freely acted on by castor oil and an enema, the piles were removed, and the fissure touched with nitrate of silver: the operation was performed while she was under the influence of chloroform. After the third day the fissure was dressed with the following: Spermaceti ointment one ounce, acetate of lead six grains, extract of belladonna a drachm; the bowels were kept easy by taking a teaspoonful of an electuary every night.

When the spasmodic action of the sphincter had subsided the ointment was discontinued, and four ounces of water, containing eight grains of sulphate of zinc and a drachm of tincture of lavender, were injected into the bowel night and morning. She recovered in less than a month, and all symptoms of stricture of the rectum entirely disappeared.

Fissure leading to the formation of an ulcer; sympathetic affection of the urinary organs.

In 1851, I was consulted by Mr. ——, æt. forty-five. He had suffered for about eight weeks previously severe pain at the anus, extending up the sacrum to the loins, each time his bowels were moved: it first commenced after a very costive motion. He was much troubled by a frequent desire to micturate; and had noticed his linen slightly stained with blood and matter. Leading a sedentary life, and being of costive habit, he had for several years taken large quantities of Morison's pills.

On examination, finding the sphincter ani strongly contracted, and taking into consideration the other symptoms, I suspected the existence of an ulcer, the result of fissure. An attempt to introduce the speculum inducing intolerable pain, chloroform was administered, and the instrument then used: an ulcer was exposed on the left side, of oval form, and nearly an inch in its vertical diameter; the edges were sharp and indurated, and the surface an ash color. Mercury with chalk and Dover's powder were prescribed to be taken at bedtime, and a teaspoonful of confection of senna and sulphur in the morning, to be followed by an emollient enema. He was directed to observe the recumbent position. From the appearance of the ulcer I deemed incision necessary, but it was objected to, and a wish expressed that other means should first be tried: nitrate of silver was applied on three separate occasions, and other applications were had recourse to during a period of six weeks, but without advantage. I then insisted on the necessity of the operation, to which the patient gave his consent. Having administered chloroform, I introduced into the rectum the forefinger of the right hand, and passed upon it a probe-pointed straight bistoury, and made an incision through the ulcer, dividing the mucous membrane, submucous cellular tissue, and possibly a few muscular fibres. From the time of the operation the ulcer rapidly improved, and in less than three weeks he was restored to health and comfort.

Fissure degenerating into an ulcer; sympathetic affection of the urinary organs; incision.

Mr. S——, æt. thirty-nine, a gentleman residing in the country, had suffered for some time pain in the rectum, and frequent desire to micturate. His usual medical attendant, considering the symptoms depended on irritation of the urinary organs, prescribed appropriate medicines to allay that condition, and catheters were also introduced into the urethra, but without benefit. On his arrival in town he applied to me. In stating his case he complained of great pain at the anus during the act of defecation,

increasing to intense agony, and continuing for about two hours afterwards. The bowels were constipated, and from the pain he suffered he put off the calls of nature as much as possible: his bladder was very irritable, having frequent desire to pass his urine. By digital examination of the bowel, an ulcer, with indurated edges, was felt on the left side. Having ordered means by which the bowels were fully relieved, the following day I incised the ulcer, by transfixing its base with a small curved knife, and cutting into the open side of a speculum previously passed into the bowel. The ulcer presented a foul, indolent surface, with defined raised margin. The after-treatment was the same as has been advised, and a rapid recovery ensued.

CHAPTER VI.

NEURALGIA OF THE ANUS AND EXTREMITY OF THE RECTUM.

That the rectum and anus are occasionally affected by a morbid exaltation of sensibility, independently of inflammatory action in a recognizable form, or the existence of any appreciable lesion to account for the pain experienced, cannot be doubted; nor is there any reason why these parts should be exempt from this affection, when we find it attacking not only the face, limbs, but other parts of the body, supplied by the cerebro-spinal nerves; and modern investigations into the pathology of the nervous system furnish abundant evidence that organs supplied by the ganglionic nerves are also affected by neuralgia.

This disease, in its substantive form, will be most frequently met with in anæmic individuals, in whom the nervous sensibility is generally excessive and often deranged. Females whose systems have been depressed by menorrhagia, or frequent child-bearing, particularly if the labors have been attended with violent floodings, are liable to become the subjects of this disease, as well as other forms of neuralgia. Those individuals who have been debilitated by accidental losses of blood, by diseases of a depressing character, or by excesses and irregular habits, are also prone to the affection.

The pain varies much in character and in intensity in different cases, and sometimes even in the same patient; it will be described as aching, lancinating, throbbing, burning, &c.; it may be preceded or accompanied by neuralgic pains in other parts, or be the only one affected. The pain in some cases is constant, but is more often remittent; in other cases it will be observed to be periodic, returning at certain intervals and continuing for a definite time; atmospheric changes also exert a powerful influence on the disease.

Neuralgia of the rectum more often arises from irritation in some portion of the alimentary canal than from other causes; the

stomach, small intestines, or colon, being the primary source of the affection; or it is induced or accompanied by irritation of the uterus and vagina in the female, of the testicle in the male, or of the urinary organs in either sex: exposure to cold and damp, sitting on cold and wet stones, will occasion it; it is also induced by the influence of malaria. In the autumn of 1852 I had a man under my care who was said to have piles; but, upon inquiring into the history of the case, no doubt remained in my mind that he was suffering from neuralgia induced by malaria: he complained of great pain at the fundament, occurring daily, and continuing for some hours; it was not induced at stool, neither was it aggravated by the evacuation of the contents of the intestine; he had no bleeding from the anus, nor was there any tumor or lesion of any kind discoverable. He had been engaged during the harvest-time in Essex, and exposed to the influence of night air. The skin during the time the pain was present was slightly hotter than natural, and the pulse a few beats quicker; the tongue was coated, and the bowels were tolerably regular. To improve his general health, purgatives and tonics were prescribed, and continued for a few days; to mitigate the pain, he was directed to apply an ointment of one part of the extract of belladonna and seven parts of lard, but it failed to have the desired effect. His bowels having been freely acted on, and his tongue becoming cleaner, quinine was administered, under the use of which the pain declined, and he very shortly entirely recovered.

The treatment of neuralgia in any form is often difficult, from the obscurity of the cause giving rise to it, but which, if possible, must be ascertained. If it can be traced to irritation, resulting from fecal accumulations, or a depraved condition of the secretions and excretions of the alimentary canal, such purgatives as are deemed most appropriate to the case must be prescribed, conjoined with a strict observance of regimen, both in regard to quantity and quality. In anæmic patients it will be advisable to prescribe the various preparations of iron: the ammonio-citrate of iron in infusion of calumba will be tolerated when other salts of this metal disagree: should irritability of the stomach exist, hydrocyanic acid may be added with advantage. But some of the other preparations will at times be more desirable, such as the carbonate, the saccharated carbonate of iron of the Edinburgh

Pharmacopœia; the sulphate of iron in combination with the sulphate of quinine, to which, if necessary, a purgative effect may be given, by the addition of the sulphate of magnesia: these and other remedies will be required, according to the peculiarity of the constitution and complications of the affection under consideration. I have found small doses of extract of belladonna of marked benefit in neuralgia of the head, the face, and of the arm; the same resulting in one case of neuralgia of the rectum, in which it was prescribed. Anodyne enemata may be used at the same time that we are administering medicines by the mouth; and lotions containing aconite, belladonna, opium, and other narcotics and sedatives, applied locally. Steaming the part with infusions of narcotic plants will at times afford relief when other means have failed. In some persons, pressure has mitigated the pain, whilst the slightest touch cannot be tolerated by others.

The following curious case of this disease is related by Mr. Mayo:[1]—

I attended a patient with Mr. Stephenson, of Edgeware Road, who suffered from pain in the rectum. Something less than two years before this he had a syphilitic ulcer upon the penis, for which he had taken an unusually large quantity of mercury, owing to the difficulty of producing sensible mercurial action in the system. The ulcer, however, healed; but while he was recovering, and his system was yet charged with mercury, he began to experience aching pains in the incisor teeth and in the rectum. The sense of aching in the teeth and in the rectum was not constant, but would come on frequently during the day, without any assignable cause. It had lasted a year and a half, during which he had remained free from symptoms of lues. This patient, who was otherwise in good health, suffered his mind to be greatly distressed by the continuance of the neuralgia. He was anxious to try every plan which held out the least promise of benefiting him; but of all the remedies which he tried, he appeared to experience relief from one only, which was a course of sarsaparilla.

Dr. Bushe[2] relates three cases of what he considered neuralgia; but, from the history of the first two, and the result of the treatment adopted in the second, I am induced to think the symptoms

[1] "Observations on Injuries and Diseases of the Rectum," by Herbert Mayo, London, 1833, pp. 56, 57.

[2] Op. cit., pp. 113–116.

arose from the existence of some lesion, which was most probably superficial ulceration or fissure, perhaps not to a greater extent than the removal of the epithelium, and which, though it could not be discovered by digital examination, might be inferred from the pain caused by pressure on the particular spot. In the third case, the patient had suffered from tic-douloureux in the face for some time previously to the rectum being affected. She experienced relief by firm pressure, which she effected by folding a napkin into as small a compass as possible, placing it between her buttocks, and sitting on a wooden chair.

CHAPTER VII.

INFLAMMATION OF THE RECTUM.

Inflammation of the rectum is either sthenic or asthenic, acute, subacute, or chronic; it may be the primary disease, or secondary, resulting from disease existing in the neighboring parts, and will be either simple or specific in its nature.

The predisposing causes of proctitis are a sanguine and irritable temperament, sedentary occupation, particularly if conjoined with the indulgences of the table, a full habit of body, hæmorrhoidal affections, venereal excesses, and voluntary and involuntary pollutions; disease of the bladder, prostate gland, and urethra in the male, and of the womb and vagina in the female. The exciting causes act either through the medium of the intestinal canal, or from without.

Of those which act from within, the most frequent and important are the ingesta—dietetic or medicinal—substances swallowed with the food, either intentionally or accidentally, which lodge and irritate the intestine or penetrate its coats, such as fish-bones, spiculæ of other bones, the stones and seeds of fruits, &c.; the prolonged and improper use of aloetic and resinous purgatives, frequent and large doses of calomel and other mercurial preparations, the long-continued or excessive use of arsenic, emmenagogues similarly prescribed; the presence of entozoa, accumulation of feces, morbid secretions and excretions, concretions formed in the bowels, and hæmorrhoidal affections. To these, Bushe[1] adds rheumatism and gout, and relates two cases that came under his observation. The external agents in inducing inflammation of the rectum are accidental injuries, surgical operations, and wounds involving the anus and rectum; foreign bodies introduced from without, and the operation for their ex-

[1] Op. cit., p. 87.

traction; acrid enemata and suppositories, injuries inflicted by clumsy attempts to administer enemata; the contact of syphilitic and gonorrhœal virus and other infecting agents; the exhalation from foul privies—where the accumulation of night-soil is great—rising against the anus during the act of defecation: from this cause, soldiers, when encamped, are often affected with inflammation of the rectum, particularly if dysenteric diseases prevail, with which proctitis may be confounded; the abstraction of animal heat by sitting on the wet and cold ground or stones, or on a wet seat while driving in an open vehicle; the latter cause, besides inflammation, often inducing abscess and fistula in ano in coachmen and others; inflammation may occur in the parturient female from protracted labor, from injury from the use of obstetric instruments, rendered necessary by the emergency of the case, or by the improper and unskilful application of them; and other contingencies of the puerperal state.

The symptoms will be modified by various circumstances, depending upon the constitutional powers of the patient and the nature of the exciting cause. Acute sthenic proctitis is manifested by a feeling of fulness, weight, throbbing, and heat at the anus, extending up the sacrum; frequent desire to go to stool, attended with great straining, but by scanty evacuations, and with mucous, membranous, or muco-sanguineous discharge, the pain and suffering at the time being greatly increased. The sphincter ani will be contracted, the mucous membrane of the bowel will be red and highly sensitive, its temperature exalted, which will be evident to the finger if introduced into the bowel, but great torture to the patient will thereby be occasioned.

The sympathetic constitutional disturbance varies with the attack and nature of the cause. If it arises from cold, rigors and chills may precede the local symptoms; the concomitants of pyrexia will be present, namely, loss of appetite, heat and dryness of skin, and thirst; the tongue is white, loaded, and enlarged, with the impressions of the teeth indented into its margins; the functions of secretion and excretion are impaired and disordered, the urine is scanty and high colored, and is passed frequently and with difficulty if the urinary organs are implicated by the extension of inflammation to them: should the disease have been

neglected, and large fecal accumulations have taken place, vomiting may occur, but this is not often the case.

The complications of inflammation of the rectum are often of a serious character, and require careful consideration and treatment. The urinary organs in the male are frequently affected, the prostate gland, the neck of the bladder and urethra becoming involved in the inflammatory action, causing dysuria, strangury, or even retention of urine, the latter depending upon spasm of the muscular structure acting on the urethra. In the female the inflammation is more prone to extend to neighboring parts, the vagina, the os and cervix uteri becoming implicated, accompanied by distressing bearing-down pains. Occasionally, cases will be met with where the inflammation has extended to the peritoneum, rendering the patient's sufferings much greater, and seriously increasing the danger: to the other symptoms we shall then have superadded abdominal tenderness, more or less extensive and severe in proportion to the activity of the inflammatory action; tympanitis will also be present.

Like inflammation attacking other parts, proctitis may terminate in resolution, or subside by hemorrhage taking place from the mucous surface of the intestine; relief of all the symptoms immediately following. Should the patient have previously suffered from internal hæmorrhoids, the same termination may occur by the accession of the hæmorrhoidal flux. But if neither of these favorable results be arrived at, the inflammation may lead to ulceration of the inner coats of the bowel, an ulcer of greater or less extent being formed, or the ulcerative process may attack the follicles, and produce a number of distinct ulcers. Suppuration, external to the intestine, is liable to ensue from extension of the inflammation, or by perforation of an ulcer or ulcers, causing abscess between the rectum and vagina in the female, or between the bowel and neck of the bladder in the male, or in either sex in the loose cellular tissue around the bowel, and, as a result, the formation of fistula in ano. The hæmorrhoidal veins and peritoneum may be involved in the inflammation, and in either case the complication is of a very serious character, and is fraught with much peril to the patient. Lastly, acute proctitis may subside into the chronic form, and induce various changes in the tissues of the rectum and colon, and parts adjoining, such

as ulceration, simple or fistulous, thickening, induration, and contraction of the coats of the intestine, stricture, spasmodic stricture, spasmodic contraction of the sphincter ani, fissure, &c.

Chronic proctitis may occur primarily as well as be the result of the acute or subacute form of the disease.

Asthenic acute proctitis occurs chiefly in cachectic and exhausted constitutions, or may be caused by the poisonous and depressing properties of the exciting cause, as when occurring from exposure to the emanations of foul privies.

In the treatment, the first thing to be considered is the nature of the predisposing and exciting causes, and the activity and character of the inflammatory action. If the inflammation has been produced by the lodgment of foreign bodies, by the accumulation and induration of fecal excretions, or alvine concretions, they must be dislodged by mechanical means, all possible gentleness being observed in the operation. If the presence of ascarides is the cause, they must be expelled from their habitation by the administration of vermifuge medicines, and the use of oleaginous and terebinthinate enemata. Having attained these objects, the bowels should be kept free from irritation by the use of emollient enemata, and attention to the quality of the ingesta. In the sthenic form of the disease, and in plethoric individuals, it will be necessary to take blood locally by cupping over the sacrum and on the perineum, or by the application of leeches around the anus; the bleeding being promoted by the patient sitting over warm water after the leeches have fallen off, or by the use of hot linseed-meal poultices. The warm bath, semi-cupium, or hip-bath, will afterwards be serviceable.

The state of the excretions and secretions must be attended to. Hydrargyrum cum cretâ and the pulvis ipecacuanhæ compositus will be beneficial; if pain and tenesmus be complained of after depletion, the compound ipecacuanha powder, or simple ipecacuanha powder with henbane, extract of hop, or extract of poppy, may be administered: great relief will also be experienced by the administration of enemata, of four or six ounces of infusion of linseed, containing from thirty to sixty minims of laudanum. After the irritability of the rectum by these means has been somewhat allayed, the bowels should be moved by fresh castor oil or olive oil, or by the confection of senna and sulphur, with

or without the addition of copaiba, according to circumstances. Diluents should be taken freely, and all stimulating ingesta avoided.

The subacute and chronic forms will require the same treatment slightly modified. The abstraction of blood will be less necessary than in the acute form, but the warm bath or hip-bath, and soothing and emollient enemata, will be equally beneficial and necessary in the former states of the affection as in the latter. If excoriation, heat, and irritation are experienced, great relief will be afforded by the use of a cooling and anodyne lotion, such as a solution of the diacetate of lead, with acetic acid and wine of opium; pledgets of lint, saturated with it, being kept constantly applied to the parts.

The asthenic form of inflammation of the rectum rarely admits of depletion, either general or topical. It has a greater tendency than the other varieties of inflammation to spread up the intestinal canal, therefore our endeavors must be directed to prevent and limit the extension of the diseased action, and to support the vital powers of the constitution. The first object is to be obtained by the use of the warm bath or hip-bath, followed by stimulating embrocations applied over the sacrum and to the hypogastrium; warm terebinthinate epithems, applied on flannel, will be of great service; demulcent and anodyne enemata should be employed early in the treatment, and are always beneficial. The constitutional treatment will consist of the administration of small doses of quinine with camphor, ipecacuanha, and the sedative extracts; castor oil, either alone or with turpentine, should be prescribed to move the bowels, or the confection of senna with the extract of taraxacum and bitartrate of potash.

Should ulceration or sphacelation occur, the treatment recommended in Chapter VIII.[1] must be adopted.

In this, as in all other diseases of the rectum, great care is necessary in administering an enema not to injure the bowel with the pipe of the instrument; and there will be less probability of mischief occurring if the jet be made of elastic gum tube instead of metal or ivory.

The specific form of proctitis, arising from gonorrhœal or syphi-

[1] Page 65.

litic infection, must be treated in conformity with the principles of treatment for the diseases occurring in other parts. Enemata should not be used in these cases, lest they should favor their extension, but strict cleanliness must be enjoined: the use of cooling and anodyne lotions, and such other means as are usually employed to allay local inflammation, must be put into requisition.

The occurrence of peritonitis will be a most serious complication, and demand active and prompt measures in the treatment. In plethoric individuals blood should be taken freely from the arm, and a large number of leeches applied to the abdomen, followed by hot anodyne fomentations, or by, what is much better, a flannel wrung out of hot water, and freely sprinkled with warm turpentine; calomel and opium must be administered more or less frequently, according to the urgency of the symptoms, and counter-irritation established on the lower extremities by stimulating pediluvia and sinapisms.

The hip-bath and anodyne enemata, and a strict observance of the horizontal position, will be most efficacious in relieving the bearing-down pains experienced by females suffering from proctitis.

When the urinary organs are affected, and dysuria and strangury induced, the warm hip-bath will be required, which if insufficient to afford relief, we shall be called upon to direct other measures, particularly if retention of urine should take place; then it would be advisable to prescribe a full dose of morphine in addition to the bath: tartar emetic, in frequent and nauseating doses, will generally relax the spasmodic condition of the muscles preventing micturition; but if these means fail, and the bladder is much distended, it must be relieved by the gentle introduction of the catheter.

CHAPTER VIII.

ULCERATION OF THE RECTUM.

It is intended in this chapter to treat of ulcers resulting from simple or specific inflammation, or occurring as a complication or effect of other diseases and lesions. Those originating in fissure have already been considered.

Perhaps the most frequent cause of simple ulceration of the mucous membrane of the rectum arises either from bruising and subsequent inflammation, or from the surface being abraded, and a slight laceration produced by the passage of indurated feces; it occurs in persons of constipated habit, in whom the mucous membrane of the rectal pouch is often relaxed, and in the act of defecation a small portion slipping down below the upper margin of the sphincter, becomes jammed between it and the fecal mass, producing one of the lesions mentioned, and leading to ulceration.

It occurs not unfrequently as a consequence of dysentery, either acute or chronic, and of colliquative diarrhœa. It may be either the cause or consequence of abscess of the rectum and anus, or be the result of one of the forms of proctitis described in the previous chapter.[1] Ulceration is often occasioned by the entanglement and lodgment of the feces in the mucous follicles of the rectum; in which case several ulcers will generally exist.

Ulceration of the rectum is frequently found as a complication of disease existing in other organs, rather than as a primary and simple lesion. We meet with it associated with tubercular diseases of the lungs and liver, and tubercular deposits in other parts of the body. In children it is often a complication of thrush, of disease of the mesenteric glands, and a consequence of chronic diarrhœa. Diseases of the urethra and prostate gland in the

[1] Page 61.

male, and of the uterus in the female, also give rise to ulceration of this bowel.

Ulcers in this region will assume different forms and phases, in like manner as when they occur in other and exposed parts of the body, being similarly influenced by the causes producing them, and the state of the constitution of the individual. They vary in size as well as number, and are either superficial or involve the whole thickness of the coats of the intestine. If produced by the lodgment of feces in the lacunæ, they will be moderate in size, deep, and if they have existed any length of time, the edges will be indurated and prominent.

The symptoms of ulceration of the rectum are a discharge of sanious, purulent, or muco-purulent matter oozing from the anus, soiling the patient's linen and producing great discomfort, and perhaps excoriation of the external parts; pain in the gut extending up the sacrum to the loins, or sense of weight in the bowel, aching down the inside of the thighs, smarting at stool, and, if the ulcer be situated near the verge of the anus, there will also be spasm of the sphincter, as in fissure of that part; the feces will be besmeared with blood and pus, and the patient will be troubled with tenesmus, and irritation of the urinary organs. Mr. Colles,[1] speaking of the pain and discharge in this disease, says: "At times the quantity of discharge is much lessened, and then the sufferings of the patient are aggravated; but on the flowing off of a large quantity he experiences great relief;" this I presume must have been due to the acute and excessive inflammatory action, and not depending alone upon the quantity of matter secreted by the ulcer.

When the ulcer is situated just within the external sphincter, and spasm of that muscle does not exist, it may be brought into view by divarication of the buttocks, and pressing aside the edges of the anus with the fingers; but if it exist higher up the intestine, and in the most usual position in which it is found, namely, immediately above the upper margin of the internal sphincter, the speculum must be used to dilate the anus, when we shall with ease be able to judge of the situation, form, extent, and character of the ulcer. Mr. Colles[2] recommends "a blunt polished

[1] "Dublin Journal," vol. v. p. 156. [2] Op. cit.

gorget, with its concavity looking towards the seat of the disease, to be passed upon the finger into the rectum; then, by everting the anus as much as we can, we shall obtain a full view of the ulcer by the light reflected from the gorget." By the introduction of the finger, and making a careful and gentle exploration, we may arrive at a very correct knowledge of the extent, form, and situation of the ulcer by the pulpy feel of its surface, and by its edges being raised above the surrounding tissue; but, as the introduction of the speculum is not attended with more pain than digital examination, it is preferable and more satisfactory to have recourse to it, as we shall thereby acquire a better notion of the precise character of the sore.

Ulcers of the rectum assume every variety of form save that of the healthy ulcer, with small florid acuminated granulations rising to the level of the surrounding surface, and the process of cicatrization advancing from the margins. Ulcers in this region, in unhealthy and broken-down constitutions, are sometimes attacked with phagedæna.

Many circumstances concur to interfere with a healthy reparative process in ulceration of the rectum. The constant contusion, and stretching of the ulcerated surface by the passage of the feces, the irritation produced by contact of the excretions, the congestion that occurs in the capillary vessels by the whole weight of the column of blood reacting upon them, from the absence of valves in the portal venous system, and the depending situation of the hæmorrhoidal veins, from which the return of blood may be still further impeded by accumulation of feces, or the presence of pelvic tumors pressing upon them. Other impediments exist to the healing process, such as the puckering and undue and unequal pressure the ulcerated surface is subject to, if situated within and embraced by the internal sphincter; and, lastly, the impossibility of keeping dressings accurately applied to the ulcer, and making that equal and constant pressure which proves so efficient in ulcers occurring in other parts, accompanied by retarded venous circulation.

From the liability of ulcers of the rectum to become congested while the patient is allowed to be about, it will be necessary to confine him to the bed or sofa while under treatment; and during that time a strict regimen must be enforced, all stimu-

lating food being prohibited, and only that allowed which will form the least amount of excrementitious matter.

In this disease we shall seldom be called upon to practise general bloodletting; but, if there be much throbbing and fulness about the part, the local abstraction of blood by cupping or leeches to the sacral region and perineum may be necessary; emollient enemata will always be beneficial. Attention must be directed to the state of the general health, which we must endeavor to restore by appropriate means if it has been impaired by disease or irregularity of habits. Constipation must be remedied, the bowels are to be freed of fecal accumulations by enemata, thrown up by O'Beirne's tube; the functions of the liver and pancreas are to be promoted by mild doses of mercurials, taraxacum, or nitro-hydrochloric acid, and irritability allayed by sedative and sudorific remedies.

Provided the ulceration is recent and not of great extent, it may generally be made to heal by the adoption of the constitutional treatment just mentioned, and by topical applications. The ulcer is to be brought into view as in making an examination, and the solid nitrate of silver applied more or less freely according to its condition, or various stimulating lotions may be used by means of a camel-hair pencil or swab of charpie.

It will be necessary, in some cases, to have recourse to these applications several times. Four or six ounces of water, with zinc, or lead, and two or three grains of extract of opium or belladonna rubbed up in it, and injected into the bowel once or twice in the twenty-four hours, will sometimes be found useful.

Under the foregoing plan of treatment, the ulceration, if not extensive, will generally take on the reparative process, and cicatrization rapidly follow. But it frequently happens the surgeon is not consulted till the disease has persisted some time, or is extensive, attended with great pain and violent spasmodic contraction of the anus; local applications will then be of no avail, and incision must be had recourse to: it is to be performed in the same manner as described in Chapter V.,[1] on fissure, only that the sphincter muscle must be entirely divided. The incision is to be made through the centre of the ulcer, except when it is

[1] Page 44.

situated on the posterior or anterior aspect of the rectum, in which case it will be advisable to make an incision on either side of the median line, for the reasons elsewhere urged; light dressings must be applied to the wound, and a rapid cure usually ensues. The principle on which this is effected I conceive to be the following: the ulcer is freed from all undue pressure, the spasm of the muscle ceases, the bloodvessels are relieved from engorgement, the feces pass without difficulty, and medicaments may be more easily applied to the part.

Previous to the operation the bowels should be unloaded by a dose of castor oil or laxative electuary, followed by an enema of thin gruel; and after it has been performed, a dose of opium should be given for the double object of tranquillizing the patient and producing temporary constipation.

Should ulceration attack many points of the intestine, and extend high up, the case will probably terminate fatally, in spite of the most judicious measures that we can employ.

Venereal ulceration may attack the rectum by the direct application of the poison from the genitals, or it may coexist with some form of secondary syphilis. In the first volume of the *Pathological Transactions*[1] is an account of the extensive ulceration of the rectum from syphilis: the specimen exhibited by Mr. Avery was taken from the body of a girl who died in Charing Cross Hospital: the ulceration extended three inches up the intestine, and occupied the whole internal surface to that extent.

Venereal ulcers of the rectum are seldom met with except in those of the most depraved morals; and when they occur they often take on a phagedænic action, from the constitution being worn out by vice and debauchery, death speedily terminating the sufferings of the unhappy victims: in this country this form of disease is rarely seen except in those prostitutes residing in the neighborhood of the Docks or other low localities, and who, during their brief period of existence, are constantly under the influence of spirituous liquors.

Syphilitic ulceration not unfrequently leads to perforation of the recto-vaginal septum in the female, and recto-vesical walls when occurring in the male: records of such cases are more

[1] Pages 67, 68.

numerous in the writings of foreign authors than in those of this country.

The treatment must be varied according to circumstances. In phagedæna we must try to arrest the morbid action by the application of the concentrated nitric acid, taking care not to induce perforation of the bowel. The constitutional powers must be maintained by nutritious food, stimulants, quinine, &c.

Ulceration occurs in cases of stricture of the rectum above the constricted part, as a consequence of pressure of accumulated feces; the whole thickness of the intestine may be perforated, giving rise to abscess, which may open externally by the side of the anus, or perforate the serous cavity of the abdomen, producing fatal peritonitis.

In the treatment of this last form of ulceration our attention must be directed to the cause, and if that cannot be remedied, we shall be able to do but little to mitigate the effect.

Superficial ulceration treated with nitrate of silver.

Mrs. T——, of middle age, delicate constitution, had been subject to mucous diarrhœa. Three weeks previous to consulting me, she experienced great pain at stool and afterwards, of a smarting, burning character; she had purulent discharge, and complained of a sense of weight in the rectum, pain up the sacrum and in the loins, and bearing down of the womb. By examination I discovered extensive superficial ulceration near the upper margin of the sphincter. I injected an enema of decoction of linseed, and afterwards passed the solid nitrate of silver over the ulcerated surface. I directed she should confine herself to the couch, and that her diet should consist of broths and farinaceous foods, and desired her to have a hot hip-bath each night before retiring to bed. Her bowels were kept easy, and enemata of four ounces of mucilage with liquor plumbi diacetatis and tinctura opii, were injected into the bowels twice a day. Twelve days sufficed to effect a cure.

Superficial ulceration treated with nitric-acid lotion.

Mr. H—— sought my advice on account of purulent discharge from the anus, great pain in defecating, continuing for some hours afterwards: he also had irritability of the bladder. He was accustomed to high living, and attributed his indisposition to having swallowed a spicula of a bone of a partridge, which injured the bowel in its passage outwards. By examination I

detected a superficial ulcer, somewhat less than a shilling in size: the edges were inflamed, and the surface covered with a tenacious muco-purulent matter. I applied the nitric-acid lotion on the occasion, put him on spare diet, enjoined the recumbent position, and directed the administration of an enema every day. He made a rapid recovery.

Ulceration of the mucous membrane; incision of the sphincter.

Mrs. L—— for several months had suffered pains in the rectum at and after defecating, accompanied by purulent discharge, which she attributed to internal piles: she took various empirical remedies recommended by friends, being unwilling to seek medical assistance; but, her sufferings increasing, she ultimately placed herself under my care. Her bowels had always been constipated, seldom acting without medicine. Some years previously she had hæmorrhoids, which were removed by operation. I examined the bowel, and discovered above the sphincter an ulcer on the right side of the intestine of the size of a shilling; the edges were indurated, the surface pulpy. Being unwilling to submit to an operation, a variety of applications were used, the nitrate of silver, nitric acid, and others of a less active character; the recumbent position was adhered to, and a light diet observed; the bowels were kept easy by laxatives and emollient enemata, but the ulcer did not heal. Finding no benefit from the treatment, she consented to the operation proposed. I divided the sphincter, carrying the incision through the centre of the ulcer; an opiate was given after the operation. The wound was dressed in the usual manner; it granulated from the bottom, healed kindly, and in less than a month she had quite recovered.

Ulceration, its extension arrested by nitric acid, and division of the sphincter afterwards.

Mr. William Bennett requested me to see F. M——, æt. forty-one, of broken-down constitution. Somewhat less than a fortnight previously he began to experience pain in the rectum and anus; it increased in severity each day, and was excruciating when the bowels were moved: his linen was stained with pus and blood. When I saw him, febrile symptoms were strongly marked, the skin being hot, his face flushed, tongue dry and brown in the centre, and the margins and point preternaturally red; the pulse feeble and quick: he was much prostrated. By the finger, introduced into the bowel at its posterior part, a large ulcerated surface was felt, commencing a quarter of an inch from the anus. On dilating the anus the edges of the ulcer were perceived to be irregular, abrupt, and highly inflamed; and the surface was

covered with an ash-colored slough: from the recent accession of the symptoms it must have extended rapidly. A large enema was at once administered, which unloaded the bowel. I then applied nitric acid to the surface and edges of the ulcer: a dose of opium was given immediately afterwards. On the following day, perceiving the ulcerative process to be arrested, I divided the sphincter on each side, cutting from within outward in the usual manner; lint was placed between the edges of the wounds, and three-fourths of a grain of morphine in solution was directed to be taken immediately, and six grains of Dover's powder and two of gray powder at bedtime; a poultice to be applied to the part, and renewed at night. The powder was repeated twice a day for a short time: he remained in bed, and his diet was restricted to broth and arrowroot. The constitutional symptoms subsided; the third day he had some castor oil, and the dressings came away, when the bowels acted; after which a lotion of nitrate of silver was used to the ulcer, and simple lint to the incisions. The plan was continued till the parts were quite healed, which occupied little more than a month.

CHAPTER IX.

HÆMORRHOIDAL AFFECTIONS.

HÆMORRHOIDAL affections are a class of diseases which acquire importance, and demand the careful attention and consideration of the practitioner in consequence of their prevalence, the suffering and great discomfort they produce, and their effects on the constitution when they have existed for any length of time, as well as from the great benefit and perfect relief obtained by the adoption of a proper mode of treatment in relation to the true pathology of these affections, and a due appreciation of the causes by which they are induced.

Hæmorrhoids is a term applied generally to certain tumors, occurring at the verge of the anus, or within the rectum; and, like many others in surgical nomenclature, is not the most appropriate that could be chosen, as it conveys no adequate idea of the nature of the disease; yet by use it has become familiar both to the profession and the public, and its import generally understood: piles is the popular name under which these affections are known, and, indeed, by many, it is applied to almost every other disease implicating the rectum and its terminal orifice.

As the successful treatment of disease necessarily depends on our accurate knowledge of its pathology, it will be desirable, firstly, to consider the character and structure of the several kinds of tumors called piles, or hæmorrhoids, and then to speak of the causes, symptoms, and treatment. The ancient physicians, from a defective knowledge of anatomy and pathology, were unacquainted with the true nature of these affections, and held very erroneous opinions of the structure of the tumors forming hæmorrhoids; they also entertained the notion that they performed the function of evacuating black bile and melancholic humors from the system. After the discovery of the circulation of the blood by the illustrious Harvey, a new but equally erroneous theory

was generally received; it being conceived that bleeding from external piles depleted the system generally, and that hemorrhage from internal piles depleted the portal system only. By later, and even by recent authors, hæmorrhoids are considered to be varices, and analogous to that condition of the spermatic veins constituting varicocele, and to the dilatation of the superficial veins of the legs, which causes so much distress, and so often gives rise to very troublesome ulceration. As a result of this erroneous opinion, a plan of treatment is adopted alike disappointing to the practitioner and the patient. The veins of the rectum are large, numerous, unprovided with valves, and anastomose freely with those of contiguous organs, and are liable to congestion from various causes, in which state they are readily seen beneath the thin integument and mucous membrane of the anus; and although entering into the composition of some hæmorrhoidal tumors, they do not constitute the disease.

The following classification of hæmorrhoidal complaints is adopted by Montègre:—[1]

1. Blind or dry Hæmorrhoids (Cæcæ)
2. Hæmorrhoids with discharge (Fluentes)
   - White discharge (Albæ), with catarrh of the intestines
   - Sanguineous discharge (Sanguinolentæ)
     - By Exhalation
     - By Rupture
3. Hæmorrhoids with tumors (Tumentes)
   - Varicose (Variscæ)
     - Dry
     - Bleeding
   - Mariscous (Mariscæ)
     - Dry
     - Bleeding from dilated pores
4. Painful Hæmorrhoids (Dolentes)
   - Inflammatory
   - Nervous
   - Fissured
5. Hæmorrhoids with constriction of the anus (Cum constrictione ani)
   - Indolent
     - From induration of the tissues
   - Painful
     - Spasmodic
     - Scirrhous
6. Hæmorrhoids with ulceration (Ulcerate)
   - Superficial
   - Fistulous

[1] "Des Hémorrhoïdes, ou Traité Analytique de toutes les Affections Hémorrhoïdales," par A. J. de Montègre, Deuxième Edition, Paris, 1830, p. 71.

7. Hæmorrhoids with prolapsus (Cum procidentia ani)	From elongation of the internal membrane
	From invagination of the intestines
8. Hæmorrhoids with irritation of the bladder (Cum irritatione vesicæ urinariæ)	With dysuria
	Strangury
	Hæmaturia

We here find a difference in the symptoms, or the presence of some concomitant of the disease used to indicate a variety, the inaccuracy of which is very apparent. No better classification can be adopted in respect to the pathological structure of the several tumors, as well as to the treatment to be pursued, than the division into internal and external hæmorrhoids; the former being those which occur within the margin of the anus, and involve the mucous membrane of the intestine, and the latter those which are situated external to the sphincter ani, and are covered by the thin integument of the anus.

External hæmorrhoids.—These tumors occur at the verge of the anus, and are covered by the thin integument of that region; but occasionally they will be observed to extend a short distance within the anal orifice, and will then be partly covered by the integument, and partly by the mucous membrane of the intestine. In form they are mostly globate, and have a broad extended base; they are of a livid color at first, but lose that as their active state subsides. They are tense and elastic to the touch, and exquisitely painful when inflamed, the anguish then being so great that the patient is unable to walk or take any exercise, and in most cases even sitting is impossible. The generally received opinion respecting these tumors is, that they are formed by the distension of a loop of a hæmorrhoidal vein; but such is not the case: were it so, we should not observe, as we frequently do, that external hæmorrhoidal tumors subside, and that the tissues assume their normal condition; for it is not in the nature of veins to contract, even when they have been but slightly dilated; how then can they contract after such an amount of distension necessary to constitute one of these tumors? Further, when these tumors are incised, the blood is turned out as a clot; or if fluid, is not at all commensurate in quantity with that which would flow from a

dilated and congested vein. I have carefully examined some of these tumors after they have been improperly cut off by others, and I have never succeeded in tracing anything like the tunics of a vein: my investigations and dissections justify me in stating that they consist of the thin integument and cellular tissue of the anal region into which blood has been extravasated, in consequence of active congestion of the hæmorrhoidal vessels, produced by causes to be hereafter mentioned: generally, the blood is encysted in a central cavity, having a smooth glistening surface; in some cases, several of these cavities filled with blood are formed in a single tumor.

After the acute stage attending the development of these tumors has subsided, the blood that has been effused into their interior becomes absorbed, and if they have not been distended to any great extent, the skin contracts, and the parts resume their natural condition; but if the tumors have attained the size of a cherry, or larger, the elasticity of the integument will have been destroyed by over-distension; and upon absorption of their fluid contents, pendulous flaps remain, prone to take on increased action, and form excrescences which may attain a considerable size, and occasion as much or more suffering than the primary disease.

Mr. Howship[1] describes another swelling occurring at the margin of the anus, to which he applies the very inappropriate term of "serous hæmorrhoid," in contradistinction to that already described, and which he calls the sanguineous hæmorrhoid: he thinks the difference in structure depends on the constitution of the patient; the sanguineous hæmorrhoidal tumor occurring in the strong, and the serous in those of low vital powers. This serous hæmorrhoid is pale, elastic, shining, semi-transparent, and more frequently forming a ring round the verge of the anus than appearing as a distinct tumor. In practice, I constantly observed this form of swelling, and cannot consider it as a separate variety of hæmorrhoidal tumor, it being simply an œdematous distension of the loose cellular tissue and thin skin of the parts, depending on irritation in the immediate vicinity. This condition commonly

[1] "Practical Observations on the Symptoms, Discriminations, and Treatment of some of the most important Diseases of the Lower Intestine and Anus," by John Howship, 1824, p. 208.

occurs as an effect of inflamed internal hæmorrhoids, and is also induced by fissure, ulceration, fistulæ, &c., and even by acrid intestinal secretions.

Internal hæmorrhoids present three varieties, differing in structure and in the prominence of some of the symptoms attending hæmorrhoidal affections generally. I shall describe them in the order of frequency in which they prevail. The first consist of loose folds of mucous membrane, with the submucous cellular tissue hypertrophied, the arterial capillaries abnormally developed and actively congested, the venous radicles being in a like condition. When these tumors are prolapsed, they are seen to be of a bright-red color, spongy in texture, the surface villous like the conjunctiva in chronic ophthalmia; they readily bleed, the blood being spirted out in fine jets, as if from dilated pores, or oozing from the general surface. Its character is arterial; and I may here mention a curious fact—that those authors who describe hæmorrhoidal tumors as varices, when referring to the hemorrhage from them, always speak of the blood as being bright in color, whereas if it issued from dilated and diseased veins, in which the circulation is necessarily much retarded, it would be even much darker than ordinary venous blood. These tumors are usually attached by a broad base near the upper margin of the internal sphincter; sometimes the anal integument is implicated, either from the great size the hæmorrhoidal tumors have attained, or their originating near the external orifice. In the second variety the tumors are more solid, somewhat round or pyriform, with a smooth dull-color surface. They are attached by a peduncle, and, when not prolapsed, lie in the pouch of the rectum, above the internal sphincter. They are composed of mucous membrane, hypertrophied cellular tissue, and veins having their tissues much thickened. Sometimes a portion of these tumors is of the same anatomical structure as those previously described, in which case hemorrhage from them may occur; otherwise loss of blood does not attend this form of tumor, except in a few cases, when at the period of defecation blood is mechanically squeezed from the adjacent mucous membrane, but does not issue from the tumor itself. The third variety differs essentially from the two preceding, and its character would be more clearly indicated by the term vascular excrescence, it being a florid, excessively vas-

cular, granular condition of a portion of the mucous membrane, seldom exceeding a shilling in size, and generally much smaller. The loss of blood by those affected with it is very considerable, and in all cases that have come under my observation, a large arterial branch has been distinctly felt coursing to it.

Internal hæmorrhoids vary much in size and number, but the accessory phenomena attending them, such as pain, hemorrhage, &c., are not increased in proportion to either, and cases are met with in which a greater loss of blood occurs, or a greater amount of pain and suffering is induced, from one or two small piles than when there are several large ones.

When a hæmorrhoidal tumor is situated near the anus, though it may not have attained any great size, it is very liable to be prolapsed during defecation, particularly if the bowels are costive, giving rise to pain, spasm of the sphincter, and other distressing symptoms. Those that are situated higher in the bowel are not prolapsed so early in the disease; but, by repeated irritation and the dragging down they experience during the time the feces are evacuated, they become elongated, and at length protrude externally: at first they return within the anus, by the action of the muscles of the part, but after a time the patient finds he is obliged to replace them with his fingers. In some cases this is done with facility, but in others greater difficulty is experienced, owing either to the size of the tumors, or to their being constricted by the sphincter muscle: under these circumstances the suffering is very great, and the individual is induced to postpone the calls of nature, or defer them till the night, finding it easier to return the tumors whilst he is in the horizontal position, in which he also experiences more speedy relief from pain. In many cases, when the tumors are large and numerous, and have been subject to prolapse for a length of time, the sphincter and tissues of the anus lose their tone, are much relaxed, and the patient is subject to constant annoyance by their protrusion whenever he attempts to walk, and even by riding in a carriage: nor is the prolapsus in this stage confined to the tumor alone, for the bowel having lost its support, the pouch of the rectum is easily dragged down by the morbid growths, and by the expulsive efforts at stool.

The annexed wood-engraving is a typical illustration of the ordinary appearance of internal hæmorrhoids that have existed

some time: the sphincter had lost its tone, and the tumors protruded even by the patient assuming the upright position. The case occurred in one of the suite of the late Duke of ——: he had suffered intense pain and lost much blood: he also experienced great irritability of the urinary organs. In December, 1856, with the assistance of Dr. Sanderson, I removed the tumors by ligature: chloroform was administered by Mr. Clover. In a fortnight he was quite well, and now enjoys perfect health.

As a consequence or complication, some of the following phenomena always attend hæmorrhoidal tumors: inflammation, pain, hemorrhage, mucous discharge, ulceration, abscess, fistulæ, fissure, prolapsus, and irritation and spasm propagated to other organs, as the urethra, bladder, prostate gland, and testicles in the male, and to the vagina and womb in the female.

Inflammation, of greater or less severity, always attends the formation of piles; it may not be severe at first, nor occasion much inconvenience, being marked only by itching of the anus, and a sense of fulness and slight aching: in other cases the inflammatory symptoms will be much more prominent. When it has recurred several times, and the tumors have become permanent, the pain will be very great. Inflammation, if not checked by treatment, or terminated by resolution or by the supervention of the hæmorrhoidal flux, may induce various morbid actions in the tumors, as ulceration, suppuration, &c.; it is also liable to extend to the contiguous organs in either sex.

The pain attending hæmorrhoids will vary much in character and intensity in different cases, and will bear no proportion to the size or number of tumors which exist, being frequently most severe when only one small hæmorrhoid is present; the complications attending this affection will also have great influence with regard

to it. In the quiescent state of the tumors, there will merely be a sense of weight and fulness in the rectum; if inflammation be present, there will be throbbing, heat, and aching, aggravated by defecation; should the complication of fissure exist, there will be smarting at stool, followed by spasm of the sphincter, and aching of an agonizing character continuing from half an hour to several hours. In some cases the pain will extend to the urinary and genital organs in either sex, up the sacrum to the loins, to the hips and down the thighs; and I believe many cases of sciatica depend on irritation induced by disease existing in one or other of the pelvic organs. I have seen a case where the pain was chiefly located in the heel and under part of the foot, and have observed the same in several patients who had stricture of the urethra: in them it was at first increased by passing the catheter, but subsided as the strictures yielded to treatment. Sir Benjamin Brodie mentions an instance where pain in the foot was the prominent feature of the hæmorrhoidal affection. He says: "A lady consulted me concerning a pain to which she had been for some time subject, beginning in the left ankle, and extending along the instep towards the little toe, and also in the sole of the foot. The pain was described as being very severe. It was unattended by swelling or redness of the skin, but the foot was tender. She labored also under internal piles, which protruded at the water-closet, at the same time that she lost from them sometimes a larger and sometimes a smaller quantity of blood. On a more particular inquiry, I learned she was free from pain in the foot in the morning; that the pain attacked her as soon as the first evacuation of the bowels had occasioned a protrusion of the piles; that it was especially induced by an evacuation of hard feces; and that if she passed a day without an evacuation at all, the pain in the foot never troubled her."

Hemorrhage is one of the most frequent of the accessory phenomena of internal piles, and at times the most prominent symptom, and, when excessive, is also the most alarming, from the serious effects thereby occasioned: it usually takes place during the evacuation of the contents of the bowel, occurring after the passage of the feces, but sometimes preceding them. It is mostly of an active character, but may become passive by the vessels being debilitated, and the blood attenuated, as a consequence of

the profuseness of the hemorrhagic discharge. The color of the blood evacuated is bright vermilion; but if it has been retained in the cavity of the rectum, it then becomes dark, and is passed in clots.

The severity of the concomitant symptoms denoting a loaded state of the hæmorrhoidal vessels is not always an index of the amount of hemorrhage that may occur, sometimes the discharge of blood being trifling though the preceding premonitory signs have been strongly marked; whilst, in other cases, the loss of blood will be very great, notwithstanding that little discomfort or inconvenience has previously been experienced.

In the commencement of the hæmorrhoidal affection, the bleeding will usually cease after a few days, and the several attendant symptoms then subside; yet not unfrequently the bleeding will continue for a much longer period. Some individuals experience but a single attack during life; while in others, the hemorrhage may return at uncertain intervals of weeks, months, or years; or again, it may assume a periodic character, and return at longer or shorter, but regular intervals. As a general rule, the bleeding increases both in frequency and amount with the duration of the disease. In females it is not unusual to observe the hæmorrhoidal discharge interfering with or becoming vicarious with the catamenial functions; and in some instances these discharges will alternate.

There can be no doubt that the quantity of blood lost in many of the cases recorded must have been greatly exaggerated; and patients are always prone to imagine it larger than it really is, from the alarm created by the sight of blood, by the show it makes on their linen and clothes, as well as from the liability of its admixture with other fluids imposing on their inexperience.

Mr. Du Pasquier informed me a patient of his lost one night, while in bed, eight or nine pounds of blood. Mr. Calvert[1] adduces the two following cases, which came under his own observation: "A middle-aged woman, a patient of the Manchester Infirmary, in whom the hæmorrhoidal discharge had been long suppressed, was seized with colic pains, with a sensation of weight about the

[1] "A Practical Treatise on Diseases of the Rectum and Anus," by G. Calvert, pp. 16, 17, London, 1824.

loins and sacrum; an enema was exhibited, which brought away some liquid feces, and soon after a discharge of bloody fluids, amounting to more than three chamber-pots full in less than two hours. She was dreadfully reduced in consequence, but the pains subsided, and after some time she regained her former strength." "A young woman, an out-district patient of the same hospital, was affected with pain in the head and loins, symptoms of general fever, with tenesmus and sympathetic irritation of the bladder. In this state she continued for some days, when the hæmorrhoidal discharge to which she had been subject returned, and more than a pint of blood was voided for near a fortnight. The pains in the head and loins, with the other symptoms, disappeared with the recurrence of the discharge, and were succeeded by a small feeble pulse, œdema of the face and extremities, oppression at the region of the stomach, and great prostration of strength. The discharge was eventually stopped by the vigorous use of spirituous and astringent injections, with such other means as are generally employed when affections of this nature are continued from debility."

The following are some of the cases quoted by Montègre,[1] to which, however, credence cannot be given without hesitation. "Montanus,[2] according to the report of Schwevcher, saw a patient who had passed two pounds of blood for forty-five successive days, and finally recovered. Cornarius[3] mentions the case of a gentleman, who, after drinking freely of Hungarian wine, lost two pounds of blood from the nose, and six pounds on each of the four following days from the anus. Nevertheless, he got well without any remedy. Pomme[4] gives the case of a man, thirty-six years of age, of an atrabilious temperament, who for a long time had been subject to an excessive hæmorrhoidal flux, for which he tried many remedies without obtaining relief. At length, having adopted the idea that it had a venereal origin, he underwent an antisyphilitic course of treatment, in consequence of which the flux disappeared. However, he was soon attacked with distressing symptoms of cholera, when the hemorrhage reappeared. During a month he lost nearly a pound of blood daily, which was followed

[1] Op. cit., pp. 27–30.

[2] "Append. Consilior Montani," p. 59, Basil, 1588.

[3] "Observ. Med.," 26.

[4] "Traités des Maladies Vaporeuses."

by colic, pains of the face and extremities. By a generous diet, nutrient injections, and cold baths, the hemorrhage was arrested, and exercise on horseback rendered him convalescent. Lanzoni[1] cites the case of a priest who daily passed a pint of blood per anum. Ferdinand[2] says that a girl, twenty years of age, of a sanguineous temperament, sedentary habits, and endowed with much vivacity, in consequence of a violent chagrin, arising from jealousy, became affected with hæmorrhoids, and for many months daily evacuated about half a pint of blood while at stool. The menstrual discharge ceased, her face became pallid and œdematous: under proper treatment she perfectly recovered."

The amount of hemorrhage in different cases varies much; in some it is but trifling, perhaps not more than a few drops, or at most a teaspoonful, whilst in others it may be from one to several ounces, or even as much as a pint, depending on the general condition of the patient, and the presence or absence of irritation or vascular excitement in the pelvic viscera. At first the discharge of blood may be salutary in effect, by relieving the congested condition of the vessels or liver giving rise to the local affection. Frequently the patient will experience a relief of the feeling of weight and fulness in the perineum and rectum, and the other unpleasant symptoms that existed, by the loss of a small quantity of blood. When organs important to the maintenance of life are seriously affected with disease, the occurrence of the hæmorrhagic flux may serve for a time to ward off fatal effects, by preventing vascular determination to them; but when the bleeding is great, or becomes habitual, the constitution suffers, and a train of unpleasant symptoms arise: the patient becomes pale, the florid color of the lips in health fades, the gums and tongue are blanched, the complexion is sallow and dingy, and has a peculiar waxy appearance; deficiency of physical and mental energy supervenes, he is listless, his sleep is disturbed, the temper becomes irritable and pevish, frequent headache occurs, which is increased by the upright position, and relieved by the horizontal posture; the heart's action is easily excited, and the organ will palpitate violently on slight bodily exertion or mental agitation; there is difficulty of

[1] "Consult. Med.," 97; "Oper.," t. ii. p. 203.
[2] "Hist. Med.," 16, p. 40.

breathing, particularly in going up stairs, or ascending an incline, and, finally, as a consequence of the anæmic condition of the patient thus induced, œdematous swelling of the feet and legs occurs.

Mucous discharge from the anus is a very frequent and annoying accompaniment of hæmorrhoidal affections. It varies much both as to quantity and appearance: in a female patient I attended at the commencement of 1853, it was most profuse; it ran down her legs while walking, and constituted the chief source of annoyance to her. When active irritation of the mucous membrane exists, the discharge is watery, resembling a thin solution of gum, and frequently acrid, producing excoriation of the surrounding parts. When the secretion is the effect of chronic irritation, it is gelatinous in appearance, and resembles frogs' spawn, or the white of an unboiled egg. If the secretion is watery, it exudes from the anus, and soils the patient's linen, and renders him otherwise uncomfortable: when tenacious and moderate in quantity, it is discharged at stool only; but if profuse, any exertion, such as running, walking, riding, either on horseback or in a carriage, and even laughing and sneezing, will cause its ejection.

Ulceration of the surface of the mucous membrane of piles is the result of severe inflammatory action, or is produced by friction and irritation of the patient's clothes, when the tumors are subject to prolapsus: if arising from the former cause, it attacks the follicles, and penetrates deeply; whilst from the latter, the ulcerated surface will be more extensive, but superficial. External piles are more often affected by ulceration than internal ones, especially when they have become permanent and indurated, in consequence of repeated inflammatory attacks. Not unfrequently small abscesses and sinuses are formed in this last class of tumors. Occasionally abscess will occur in the cellular tissue of the rectum, by its implication in the inflammatory action, or by perforation of the mucous tissue by ulceration, and thus lead to the formation of fistula in ano. Should abscess form in the male anterior to the anus, and press upon the urethra or neck of the bladder, retention of urine may be superadded to the patient's other symptoms. In females, the abscess will extend to one of the labia, or open into the vagina, forming recto-vaginal

fistula, or, by bursting externally by the side of the bowel, establish fistula in ano.

Fissures of the anus, as a complication, more frequently take place when the piles are external, and have existed for some time, and the tissues, by chronic inflammation, are indurated and rendered less yielding to distension. They commence as slight cracks or tears, resulting from the passage of bulky and hardened feces, and increase by the ulcerative process, from the constant irritation they are afterwards subject to by the action of the bowels and the lodgment of the fecal and acrid matters. The pain accruing from this complication is very distressing; it is induced each time the bowels act, and will continue for several hours afterwards, attended with spasmodic contraction of the sphincter ani.

The sufferings and inconvenience to a patient affected with internal piles are often greatly increased by their protruding external to the anus. When the tumors are situated immediately within the rectum, they are subject to prolapsus in an earlier stage of the disease, owing to the eversion of the lower part of the mucous membrane, which occurs at the time of emptying the bowels, and to the feces thrusting the tumors before them: when situated higher up in the intestine, they do not descend at so early a period, but, by the pressure and elongation they are subject to from the passage of the feces, they at length protrude externally. At first the piles are retracted within the anus by muscular action alone after the bowels have been relieved; but in process of time this no longer occurs, and it becomes necessary to return them. Another source of distress from the prolapsus of piles, is their liability to strangulation, either by the spasmodic contraction of the sphincter, or by sanguineous engorgement: under these circumstances the assistance of a surgeon will be required to effect the replacement of the extruded parts. If the patient delays seeking the necessary aid, mortification takes place, endangering his life should the constitution be impaired by any cause, or the vital powers be naturally feeble; if the contrary condition exists, and the general health be good, the tumors will slough off, and a cure will thus be effected, but at the expense of much suffering.

The converse condition of the anus to the preceding will cause

serious distress to some, as a consequence of the sphincter having lost its tone, and becoming greatly dilated by the frequent protrusion of the piles, by their size, and by the long persistence of the disease, the patient will not only be subject to the annoyance of prolapsus of the bowel with its attendant miseries, but will be unable to retain his feces.

In addition to the complications and consecutive effects which have already been considered, others will arise: thus, in the female, by the contiguity of parts, the vagina and uterus are liable to be affected; whence arises leucorrhœal discharge more or less profuse in quantity, accompanied by pain and distressing bearing-down sensations. In the male, from the same cause, and the free anastomosis which exists between the prostatic plexus of vessels and those of the rectum, the prostate gland may be affected, inflammatory action excited, inducing enlargement and other evils; the neck of the bladder will not unfrequently be sympathetically involved, and strangury or retention of urine result. By the long continuance of chronic inflammation from hæmorrhoidal disease, stricture of the rectum sometimes occurs.

Numerous causes tend to excite hæmorrhoidal disease. In some cases we shall be able to trace it to hereditary predisposition: age has its influence; sex, climate, and period of the year, also have effect. Plethora, particularly when combined with sedentary occupations and indulgence in the pleasures of the table, strongly predisposes to the disease; mechanical and pathological obstruction to the venous circulation of the intestine is another cause; irritation, within the bowels, as from ascarides; diarrhœa, dysentery, irritating enemata, the injudicious use of mercury, certain stimulating purgatives, highly-seasoned dishes, and certain alimentary substances; diseases existing in contiguous parts, as of the prostate gland, stricture of the urethra, stone in the bladder, &c., will give rise to hæmorrhoids; and, lastly, may be mentioned, excessive venery and masturbation.

It will be desirable to trace how far, and in what manner, the several causes that have been mentioned operate in inducing the disease.

Hereditary predisposition sometimes promotes the establishment of the disease, not so much by any local tendency to the formation of piles, as by a similarity of constitution and general

organization. Thus we shall find both parents and children to be of a bilious temperament, of lax muscular fibre, the venous system of an augmented state of development, and the nervous sensibility exalted, whereby the depressing passions have a greater influence. This hereditary aptitude to hæmorrhoidal affections has been traced by many authors: Bushe[1] has observed it in several families in connection with similarity of organization, and also where that did not exist. A French author[2] mentions an instance of a family of nine people who were thus afflicted.

From several circumstances we do not often meet with hæmorrhoids till after the age of puberty; diseases from sanguineous engorgement more frequently in early life attacking the head and chest than the abdominal organs; however, at the Blenheim Dispensary, I had a child of two years of age under my care suffering from external piles. One author mentions two cases occurring in his practice, in which one patient was between six and seven years of age, and the other five; the latter also had stone in the bladder. Other practitioners have met with the disease, at an early period, but this is very far from being commonly the case. In the middle period of life we find all diseases of the abdominal organs more frequent, owing to the peculiar susceptibility then existing to vascular repletion and engorgement of this region; the circulation is less rapid in the adult, and that portion of the vascular system returning the blood to the heart is more fully developed in mature life. It is after the age of puberty that the various affairs and occupations of life engage the attention; then the habits become sedentary; depressing passions and the influence of temperament appertain also to the middle period of existence. Females who have enjoyed immunity from hæmorrhoidal affections during that portion of their lives when the menstrual functions were regularly performed, not unfrequently become the subjects of them at the climacteric period, especially those who are plethoric; and, in such cases, the hæmorrhoidal flux may be regarded as salutary, by diverting those congestive affections from the several important organs, that so often succeed the cessation of the catamenia.

[1] "Treatise on the Rectum and Anus," by George Bushe, New York, 1837, p. 170.

[2] M. J. B. de Larroque sur "Les Hæmorrhoids," Paris, 1819.

Great diversity of opinion prevails as to the relative frequency of hæmorrhoidal affections in males and females. Much will depend on the circumstances in which both are placed. Montègre thinks them more common in females in an occasional or accidental form; and to occur in males in a more regular and constitutional form. The experience of Mr. Syme and Dr. Bushe tends to confirm their greater frequency among men; the latter writer supposes the menstrual function should sufficiently relieve the system of sanguineous repletion: certainly in the majority of cases of hæmorrhoids occurring in females that have come under my observation, the catamenia have either been suppressed, or the functions more or less deranged; but in some cases this will be rather an effect than a cause. Females who are plethoric are very liable to be subjects of hæmorrhoids at the turn of life, when the menstrual flow ceases; and, in some instances, these discharges alternate with each other for some time before the uterine functions entirely subside.

Warm, moist, and miasmatous climates dispose to hæmorrhoidal affections, by inducing general relaxation, and of the venous system in particular: they also favor congestion of the abdominal viscera, and develop the bilious, sanguineo-bilious, and melancholic temperaments. Those who have resided for some time in the East or West Indies are very prone to suffer from hæmorrhoids. In the southern States of North America, in South America, in Egypt, and Turkey, these affections are very common. In the two latter countries the morals and manners of life of the people exert a great influence in producing these diseases. In dry climates, whether cold or temperate, these affections are less frequent, as is also the case with regard to many other diseases. In our climate, the variableness of the temperature often produces congestion of the internal organs, giving rise to various inflammatory and morbid actions; these are more liable to occur if the functions of the skin have been excited from any cause, and then checked by its being suddenly cooled down by a rapid fall in the atmospheric temperature.

The periods of the year in which the vicissitudes of temperature are greatest predispose more to the development of these affections than when the weather is either warm or cold, but equable. Some writers think these diseases occur more frequently

in spring, from the phenomena of life being more active at that season, the blood being more readily formed, and in greater quantity; also that the increased temperature expands the volume of the circulating fluid. It is also asserted, that northerly and northeasterly winds bring on the hæmorrhoidal discharge; but I presume they have no specific influence further than by checking the cutaneous exhalation, and thus determining the blood internally.

Plethoric individuals are more liable than others to be affected with hæmorrhoids. In them the state of repletion of the vascular system is often induced by partaking of a larger amount of aliment than nature requires, combined with a deficiency of exercise, which also excites several of the other causes co-operating in producing disease of the rectum.

Any impediment offered to the return of the blood from the lower bowel will induce hæmorrhoids; it will arise from two causes, the one being mechanical in its immediate effect, the other pathological, and depending on disease and alteration of structure in some of the internal organs. Those causes which act mechanically are the pregnant uterus, ovarian and other tumors developed in the pelvis or abdomen, which, by pressure on the large venous trunks, impede the ascent of the blood; tight lacing and cincturcs also have the same effect. The pathological causes are congestion and structural diseases of the liver, pancreas, and spleen; diseases of the lungs, heart, and large bloodvessels interfering with the free circulation of the blood.

Hæmorrhoids are frequently a concomitant of pregnancy, and in this state are of the accidental or occasional form, being induced by the gravid uterus pressing on the venous trunks, and by the general plethora which exists during this period.

Constipation is one of the most frequent and common causes of hæmorrhoids which we meet with: it tends to induce the disease in several ways: thus, when the feces are retained, they become indurated and impacted, and produce irritation of the mucous membrane, and consequent afflux of blood to the rectum; by accumulation they distend the intestine, and, pressing on the veins, interfere more or less with the return of the blood. In this habit of body the hæmorrhoidal affections become greatly engorged during the act of defecation, from the violent efforts of

the expulsatory muscles, and the congestion, arising during the temporary suspended respiration that always attends violent muscular action.

Those persons whose habits of life are sedentary are very generally the subjects of piles, more especially if they indulge freely at table. By inactivity of body, the functions of the several emunctory organs are diminished, and not the least important, that of the skin, which, when properly performed, frees the system of the products of the effete tissues, which, if retained, have a most pernicious effect on the animal economy generally. From deficiency of exercise the function of the liver is lessened, and congestion is very liable to occur. Constipation, and its effects, as a result of this mode of life, is nearly always present. The sitting position maintained by persons of the habits under consideration determines the blood to the hæmorrhoidal vessels. From these circumstances it is very common to meet with hæmorrhoidal diseases among clergymen, barristers, lawyers, those confined to the counting-house, and among the working-classes, the nature of whose occupations compels them to sit many hours, as dressmakers, tailors, shoemakers, and others. It is very common for individuals thus circumstanced to have the hæmorrhoidal discharge occurring in a regular manner, and, when moderate in quantity, having rather a beneficial effect than otherwise, and possibly saving them from some more serious malady.

Sometimes the hæmorrhoidal flux will appear as a translation of hæmorrhagic discharge from some other organ; thus arresting and keeping in abeyance morbid action that has given rise to hæmoptysis, hæmatemesis, epistaxis, &c. Bushe mentions having observed several instances in which this occurred, and records two cases: the one of a gentleman from Ireland, who had hæmoptysis, which ceased on his being attacked with hæmorrhoids, and he enjoyed good health: resorting to Paris, and being annoyed by the piles, he had them removed by Baron Dupuytren: after that he returned to America, and labored under a determination of blood to the head; of this he was relieved by leeches to the anus, and by the administration of aloes and blue pill. The other case is that of a gentleman subject to epistaxis, and who suffered from a series of cerebral symptoms, consequent on its suppression. Dr. Bushe, being consulted,

prescribed stimulating pediluvia and brisk purgatives. On the patient feeling a desire to defecate, he discharged about a pint of blood per anum, to the immediate relief of the head symptoms; a regular hæmorrhoidal flux continuing, he had no return of the epistaxis, or any of the unpleasant circumstances attending its suppression.

Mental emotions and passions, both exciting and depressing, are causes of hæmorrhoids: thus anger, fear, sorrow, ennui, &c., excite a remarkable and vital action of the ganglionic nerves of the abdomen, manifested by a sense of sinking, weight, constriction, and pain at the epigastrium. The result of this impression is extended to the surface of the body; the cutaneous vessels contract, inducing pallor, and the blood, driven from the surface, accumulates in the internal organs, producing various functional disorders of the stomach, derangement of the liver, jaundice, diarrhœa, or hæmorrhagic discharge from the rectum.

Internal irritation from a variety of sources will produce these affections. Ascarides, which infest the lower portion of the alimentary canal, are not an infrequent cause; irritation arising from diarrhœa and dysentery will excite hæmorrhoidal discharge, and we shall observe it not unfrequently as a crisis in other diseases: thus it occurs in fevers, particularly bilious and gastric fevers; also when inflammation has attacked the brain or any of the organs lodged in the thoracic and abdominal cavities; and in other conditions of the system, as hypochondriasis, &c.

Diseases of contiguous organs, by inducing an afflux of blood to the pelvic viscera, and by extension of inflammation and irritation, are common causes of hæmorrhoids: we observe them accompanying disease of the prostate gland; occurring as a consequence of stone in the bladder; the effect of stricture of the urethra, consequent on the vascular turgescence and violent straining in micturition, attendant on the aggravated forms of the later affection.

Excessive venery and masturbation, by producing relaxation of the system, and by determining the blood to the organs in the pelvis, produce hæmorrhoidal disease.

Certain purgatives and drastic medicines, as aloes, scammony, gamboge, black hellebore, rhubarb, the neutral salts, &c., particularly if prescribed in too frequent and too large doses, induce

hæmorrhoids: they act directly by irritating the mucous membrane of the rectum, and by inordinately exciting that portion of the intestine, and the lower part of the colon. Of all medicines, calomel and the other preparations of mercury have been productive of most mischief in the affections we are now considering, as well as inducing other diseases of the digestive organs. It is not from the use of the mineral, but its general abuse, that the evil arises: the practice is justly reprobated by Drs. Copland, Elliotson, and other writers on the practice of medicine. It may, however, be questioned whether all the medicines first mentioned, when properly administered, exert much influence in inducing the disease, and whether it is not rather to the state of the constitution rendering these medicines necessary that we should ascribe the local affections. They will severally readily reproduce the hæmorrhoidal flux when once it has taken place; but it is not to be inferred from this that they will cause the disease, as morbid action having once occurred in a part is much more easily re-established even by slighter causes: therefore, before attributing the malady to medicines, it is essential to ascertain if there may not be other causes to which it may owe its origin.

As well as to living above par, conjoined with a deficiency of exercise, we shall be able to trace the disease in some people to eating various alimentary substances, particularly highly-seasoned dishes, spices, onions, shallots, &c.; to partaking of very hot or cold beverages, or too great a quantity of stimulating drinks: certain wines, also cider and beer, will, in some individuals, readily induce the affection.

The local application of cold or heat, as sitting on stone seats, on the cold and damp ground, on damp cushions, the habit of standing with the back to the fire, riding rough horses, prolonged walks in hot weather, travelling a number of consecutive hours in a carriage, sitting on pierced seats whereby the blood gravitates to the anus, consequent upon its being unsupported, and on the obstruction to the circulation from the pressure on the surrounding parts; stimulating pediluvia, irritating and large enemata, are other causes of hæmorrhodial affections.

The symptoms attending hæmorrhoidal diseases vary much, and are greatly influenced by the state of the general health of the patient, the exciting cause, whether accidental or constitu-

tional, and the complications with which they are associated, and also by the piles being internal or external.

In the first attack, the patient will probably experience but slight inconvenience. If the disease is only of the congestive form, there will be itching and a sense of weight and fulness in the rectum, with uneasiness in the perineum: in a few days bleeding may occur, but does not always take place in the early attacks, and when it does it is usually critical, all the symptoms and discomfort disappearing for the time. If the disease does not thus subside, but is permitted to increase, or when several attacks have been experienced, the symptoms will be augmented in number and severity; and in addition to the weight and fulness at first felt, there will be heat and throbbing, the pain at stool will be greater, and will continue for some time afterwards: pain will also be felt up the sacrum, in the loins, and down the thighs: after a short time a flow of bright blood will be observed, either preceding or after defecation; usually increasing in quantity with the duration of the disease, and often becoming the most prominent symptom, and causing great derangement of the general health. As the disease progresses, a feeling of the presence of a foreign body in the rectum will be experienced, and at stool one or more tumors will be protruded; at first they are retracted spontaneously after the action of the bowels, but in process of time, from increase in size and loss of tone in the parts, it becomes necessary for the patient to replace them with his hand. Should the piles become constricted by the sphincter, many of the symptoms of intussusception of strangulated hernia may be induced. In weak and debilitated persons the sphincter loses its tone, the anal orifice becomes dilated, and the hæmorrhoidal tumors will then descend upon the slightest exertion, or even on assuming the erect position, causing great annoyance and discomfort: in this condition they will be liable to ulceration from the friction to which they are exposed by contact of the clothes. A mucous discharge soiling the linen is a frequent symptom; it is sometimes so profuse as to run down the patient's legs whilst standing; it may also be very acrid, and produce excoriation of the external parts, adding greatly to his other sufferings.

By sympathy and contiguity, the irritability and sensibility of

the bladder and urethra will be increased, micturition will be more frequent, and in the aggravated form we shall observe the opposite effect, strangury, or even retention of urine.

All patients who are the subjects of hæmorrhoids suffer more or less from constipation, with its concomitant symptoms, flatulence, pain, and constriction at the epigastrium, vomiting, &c. Where the disease is fully established, particularly if much blood has been lost, there will be pallor, and a peculiar dingy waxy appearance of the countenance; the respiration will be hurried and irregular, the heart's action readily increased by the slightest bodily exertion or mental emotion: this is often so distressing as to lead the patient to think he has disease of that organ, for which he may seek advice, and by dwelling too exclusively on this one effect, may mislead his medical attendant from the real disease.

Giddiness, drowsiness, weight and pain in the head, are very common symptoms in these affections, and occasionally, spasm and rigidity of the extremities will be complained of. The attacks are not unfrequently ushered in by rigors; the tongue will be furred, large, and deeply notched by the impressions of the teeth; the skin will be harsh and dry; the functions of the kidneys deranged; the pulse, increased in velocity, will be hard, and contracted, or rendered weak, irritable, and quick, from debility, suffering, and loss of blood.

Hæmorrhoidal affections are liable to be overlooked from two circumstances: the one being a delicacy on the part of the patients, leading them to conceal the origin of their sufferings; the other the severity of some of the symptoms, or derangement of other organs consequent upon them, diverting the attention away from the real seat of disease: however, a careful investigation into the origin and history of the case will not fail to elucidate its true nature.

The diagnosis of hæmorrhoids requires some attention: other growths and excrescences occur at the anal region which may be mistaken for them. The radiated folds of integument here situated are apt to take on an increase of growth, and become indurated, in those whose habits are sedentary and who sit much on stuffed seats; they occasion great itching and irritation, and interfere much with the patient's comfort and rest at night. These

growths vary in size, sometimes equalling that of a bean; they are often bedewed with moisture, and the surrounding integument irritated and inflamed. They are distinguished from hæmorrhoids by their growth being gradual, and being unaccompanied by the acute local symptoms and constitutional disturbance attending piles; the tumors themselves are indurated, but their base of attachment, which is usually somewhat constricted, is unaffected. External hæmorrhoids, when their surfaces are ulcerated, may be mistaken for venereal excrescences; but by tracing the origin of the tumors, by the subsequent history of the case, and the absence of other symptoms of the latter affection, a correct diagnosis may be formed.

Hæmorrhoidal tumors may be mistaken for polypi of the rectum; but the converse is more usually the case, particularly by patients themselves. Polypi are more gradual in their growth; they are not preceded or accompanied by the constitutional or local inflammatory symptoms that attend piles: in the benign variety of polypi, hemorrhage does not occur, except to a very slight extent, and that only on the passage of a bulky and costive stool; their surface is smooth and somewhat glistening, and not villous or granular, like hæmorrhoidal excrescences.

A very cursory examination will enable us to distinguish hæmorrhoidal tumors from prolapsus of the rectum: in fact, the only form with which they can be confounded is, when a fold of mucous membrane on either side descends, and, in the course of time, becomes thickened and rugous: in this state, however, there is an absence of the ordinary symptoms of piles; the prolapsed portion of the intestine is free from hæmorrhagic discharge, is not subject to alternations of turgescence and flaccidity; and, besides the extent of the base of attachment, we can roll the two surfaces of the membrane upon each other.

A most important distinction we have to consider, both in the prognosis, and with regard to treatment, is the source of hemorrhage, which may be intestinal, and not the result of piles. But here a little consideration will prevent error: intestinal hemorrhage is generally a result of acute and dangerous visceral disease, and the constitutional disturbance attending it will be severe, and of marked character; it more frequently accompanies the advanced stages of malignant fevers and general cachexia. The

state of the blood discharged will enable us to form a tolerably correct opinion whether it be from piles or not; when it occurs from any portion of the intestinal canal above that which is the seat of hæmorrhoids it will be clotted, very dark, and mixed with the feces and excretions, and will be passed at stool without any of the distress attending piles; nor shall we be able to detect by digital examination per anum any form of tumors or varicose state of vessels. But, on the contrary, if the hemorrhage be from piles, the blood will either precede or follow defecation, will be florid in color, and fluid, with all the characters of being recently extravasated. There will also be the local symptoms attending these affections, as weight and fulness in the rectum, pain, and others which have been previously mentioned: these will be aggravated at stool; besides, examination will reveal the presence of one or more tumors or other lesions.

Before commencing the treatment, it is most important that a careful and minute examination of the rectum and anus should be made when a patient complains of any of the symptoms of hæmorrhoidal disease: firstly, that we may arrive at a correct knowledge of the peculiar kind of tumor, and the condition of the parts, also as to the existence or not of any complication; and, secondly, because the accounts given by patients themselves are frequently inaccurate, and they are too apt to dwell on any one or more of the symptoms that may be most distressing to them.

In making an examination in the male, the patient should be directed either to lean over the back of a chair, or to lie upon a sofa on his side, with the nates projecting over the edge, and the knees drawn up; the latter position is preferable, and should always be adopted with female patients. The parts when inflamed being acutely painful, all possible gentleness must be observed, particularly if fissure of the anus exist as a complication, as slight irritation will often induce excruciating agony. Previous to making a digital examination of the interior of the bowel, the cavity of the nail should be filled with soap, which will prevent its scratching the intestine, and the finger must be dipped in oil to facilitate its introduction; lard and unguents do not answer so well, as they interfere slightly with the delicacy of the sense of touch.

Having become acquainted with the abnormal condition of

the parts, the next consideration is, whether the hæmorrhoidal affections are of a constitutional or accidental origin: it is on arriving at a just conclusion on this point that the principles of treatment must be based, and on it our success must depend. When piles have existed for a long period, have continued from youth, or the commencement of puberty, when they supervene upon or replace some serious organic or habitual affection, if they are preceded by constitutional disturbance and succeeded by an improvement in the state of the health, if well-marked indications of plethora exist, which is relieved by the accession of the hæmorrhoidal flux, and if indications of congestion, or disease in any of the organs accompany or follow its suppression or interruption, or an hereditary predisposition exists, a constitutional nature may be inferred; and local treatment must be a secondary consideration, and not adopted till the constitutional cause has been removed or palliated; this is especially necessary if there is a predisposition, hereditary or otherwise, to apoplexy, gout, phthisis, hæmoptysis, epistaxis, or other kinds of hemorrhage.

Various authors mention instances in which a neglect of the consideration of the constitutional origin, and the adoption of a local treatment of piles have been followed by serious or fatal consequences. Dr. Copland mentions three cases having come under his observation, in one of which fever was induced, in another apoplexy, and in a third melancholia, by the improper arrest of hæmorrhoidal discharge. Mr. Howship states the case of a gentleman subject to gout, who, in opposition to proper medical advice, was induced by a charlatan to have recourse to a strong vitriolic lotion, with the effect of arresting the hæmorrhagic discharge, but the patient soon after died of gout in the stomach.

The general treatment of hæmorrhoidal affections must consist in enforcing a strict observance of moderation in diet, due attention being paid both to the quality and nature of the aliment, as well as quantity; all stimulating food and beverages must be forbidden, and only that allowed which is unirritating and easy of digestion; this is a matter so important, not only in the diseases herein treated of, but in all others, that it would be well to give a patient written instructions on this point, in the same

manner as when medicines are directed to be taken. The bowels must be regulated, and constipation combated, by deobstruent laxatives and stomachic aperients. If fecal accumulations in the colon exist, these must be removed by emollient enemata; in many cases the use of O'Beirne's tube will be highly serviceable in dislodging the excrementitious matter. When the secretions and excretions of the chylopoietic viscera are depraved or deficient, means must be adopted to restore them to a healthy state; for this purpose a few grains of the blue pill with one of powdered ipecacuanha should be directed to be taken at bedtime, or mercury with chalk and extract of taraxacum may be substituted; and in the morning a purgative draught should be taken.

If these are not sufficiently active, sulphate of magnesia, potassio-tartrate of soda, or sulphate of potash may be added: castor oil is a useful laxative in these diseases: a teaspoonful of electuary of confection of senna with powdered jalap, ginger, tartrate of potash, and syrup of tolu, taken either at bedtime or early in the morning, answers very well in moving the bowels once or twice.

The addition to the electuary of two or three drachms of copaiba will be very beneficial in many cases, but renders it so nauseous that some patients cannot take it; if, however, it is made into boluses and wrapped in wafer-paper, it may be swallowed without being tasted. The functions of the skin and kidneys must receive most earnest attention: various diuretic and diaphoretic medicines must be described, as the citrate of potash and nitrate of potash in camphor mixture; a solution of the acetate or citrate of ammonia, camphor mixture, sweet spirits of nitre, and the inspissated juice of the elder; other formulæ will readily suggest themselves to the practitioner.

The importance of regular and moderate exercise must be enforced on the attention of the patient; by it the whole of the vital functions are stimulated to a healthy action: thus the circulation is increased, particularly in the extremities, nutrition is more rapid, and the depurating and excretory organs are excited in eliminating matters that have served their purpose in the economy, which, if retained, are productive of much of the apparent derangement of the system.

The vicissitudes of temperature must be guarded against by

proper clothing, and benefit will follow the occasional use of the warm bath, particularly when the action of the liver or skin is torpid. Both in external and internal hæmorrhoids ablution with soap and water night and morning will be attended with great benefit and comfort. It is not merely by washing away irritating secretions and excrementitious matter that this results, but by a direct and specific effect of the soap on the parts themselves. In internal hæmorrhoids, or in congestion of the vessels of the rectum, the injection of half a pint of cold water after each dejection will be of essential service: the advantage resulting therefrom arises from a twofold effect, the one by removing any feculent and irritating matter, the other by the immediate impression of the cold upon the nerves and vessels of the intestine.

The several complications and phenomena attending hæmorrhoids require special consideration with regard to treatment, bearing in mind, at the same time, the cause and origin of the disease. When symptoms denoting congestion and repletion of the hæmorrhoidal vessels are present, the bowels must be moved by castor oil, or the electuary before mentioned, or some other gentle purgative. It may be necessary to have recourse to the local abstraction of blood; cupping over the sacrum or on the perineum is preferable to the application of leeches around the anus; it occupies less time, is less annoying to the patient, and does not produce the local determination of blood that leeches do. When the patient has previously suffered from hemorrhage, leeches applied to the anal region will frequently reproduce it, or it may appear for the first time by the determination of blood induced by their application. After the bowels have been moved and blood abstracted, the warm hip-bath will afford ease, or flannels wrung out of hot water applied to the perineum and sacrum may be substituted.

When the tumors are inflamed, local depletion will generally be necessary; for the reason just urged, cupping will be more advisable than the application of leeches. If the piles are internal, and are prolapsed, they must be returned within the sphincter by gentle pressure, made by a fold of lint smeared with olive oil or spermaccti ointment: this must not be neglected, or, from vascular engorgement or constriction by the surrounding muscular fibres, mortification will probably result, occasioning severe constitu-

tional disturbance and much suffering. I have seen the lives of several individuals nearly sacrified by this occurrence, and in other cases I have saved the patients much pain and misery by at once removing the strangulated mass when it was impossible to reduce it, and sloughing was impending. The celebrated Horne Tooke nearly lost his life thus. Sir Benjamin Brodie,[1] in his lectures, narrates the circumstance: "Many years ago I was dining with Dr. Pearson, and after dinner he gave an account of Horne Tooke's illness. He said that he had long labored under piles; that at last mortification had taken place; that there was no chance of his recovery; and he added, that he had that morning seen him for the last time. I remember that in the middle of this history there came a knock at the door, on which Dr. Pearson said, 'Here is a messenger with an account of my poor friend's death.' However, it was some other message; but by-and-by a messenger did arrive, saying that Horne Tooke was much the same, or a little better. It turned out, as I have been informed, that the piles sloughed off, and from this time he never had any bad symptom. In fact, he was, if I have been rightly informed, cured of a disease which had been the misery of his life for many years preceding, and he lived for some years afterwards."

After the tumors have been replaced, hot poppy-head fomentations should be applied, to be succeeded by hot linseed-meal poultices. Some surgeons have advised punctures and scarifications of the inflamed and protruded piles: it is a practice that should not be adopted, being founded on erroneous principles, and will only cause the patient much annoyance without affording the desired relief. Mr. Calvert says he saw a case of fatal hemorrhage follow the practice. Montègre and Bushe alike condemn the proceeding. After the inflammation has somewhat abated, cooling and anodyne lotions will afford great relief; an aqueous solution of opium with acetate of lead and elder-flower water or rose water will answer the purpose. Enemata of cold water are beneficial in the latter stage of inflammation: the instrument used should be provided with a flexible jet, as one of ivory or metal will be likely to injure the tender parts. The bowels must be

[1] "Medical Gazette," vol. xv. p. 746.

kept gently open by means of an aperient electuary, castor oil, or other laxative.

If the tumors have fallen into a state of mortification from excess of inflammatory action, or from constriction by the sphincter muscle, meal poultices must be applied till they have sloughed off and the parts have become clean, afterwards the injection of slightly astringent lotions will promote the healing of the ulcers left by the separation of the sloughs. If the system is much depressed, stimulants, and bark with the mineral acids will be necessary; but the general treatment must be regulated according to the character and severity of the constitutional disturbance.

As previously stated, the pain accompanying these affections varies much in character and intensity, and is often greatest when there is little apparent change of structure in the part: it is generally aggravated by the several complications met with, being most severe when fissure of the anus and spasm of the sphincter are present. If pain is the result of the acute stage of the attack, the treatment advised in the congestive and inflammatory conditions will relieve it; but it is sometimes intense when only slight structural alteration of the tissues exists unattended with active inflammation: under these circumstances, the bowels being first regulated, and any depraved condition of the excretions corrected, anodyne and opiate enemata must be used, or a bougie introduced a short distance up the rectum, previously smeared with one of the following unguents:—

℞ Opii Pulveris, gr. x; Unguenti Cetacei, ℥j. Misce.
Misce.

℞ Extracti Hyoscyami, vel Extracti Conii, ʒj; Unguenti Cetacei, ʒvij.

℞ Hydrargyri c. Cretâ, Extracti Hyoscyami, āā ʒj; Unguenti Cetacei, ℥j. Misce.

When there is fissure of the anus, the application of the last ointment will relieve the pain, and often induce the healing process; but if spasmodic contraction of the sphincter coexist, the extract of belladonna must be substituted for the hyoscyamus.

So long as hemorrhage appears beneficial in relieving any organ threatened with disease, it must not be arrested, but any error in the constitution or habits of the patient that tends to maintain or increase it should be corrected. When the loss of blood is frequent or large in quantity, and the patient thereby rendered

weak and pale, and the irritability of the system increased, measures must be taken to moderate the flow, or to stop it entirely. In the first place, the bowels must be regulated so as to act gently every day; for this purpose the lenitive electuary with sulphur, or sulphate of magnesia, and dilute sulphuric acid in a bitter infusion, or in an infusion of roses, may be taken early in the morning, and a teaspoonful of the confection of black pepper, or Ward's paste, should be taken two or three times a day. The injection into the rectum, morning and evening, of four or six ounces of cold water will be highly beneficial, from its sedative and stringent effects. If the patient leads a sedentary life, he must take exercise daily in the open air, by which the secretions will be increased, and the circulation equalized. The food must be moderate in quantity, unstimulating in quality, and taken at regular and stated intervals.

Should feebleness and exhaustion be produced by the constant recurrence, or by the sudden profuseness of the hemorrhage, active measures must be taken to arrest it, and afterwards means adopted to restore the powers of the patient. The recumbent position is directed to be observed, and, if necessary, the pelvis must be elevated; then, according to the urgency of the case, recourse may be had to the injection of iced water or of metallic and vegetable astringents, as a solution of iron, copper, lead, or alum, or a decoction of logwood, oak-bark, pomegranate, bistort, or tormentil. I find a solution of tannic acid, in proportion of a scruple to a drachm in six ounces of water, better than any other local astringent. Ice, finely powdered, and put into a bladder, may be applied to the sacral and anal regions. The dilute sulphuric acid in infusion of roses, or acetate of lead with opium, and the balsams and terebinthinates may be prescribed to be taken internally.

Some authors have suggested the application of cupping-glasses to the upper parts of the body, and sinapisms and ligatures to the upper extremities; others have recommended bleeding from the arm; but I think few surgeons will be inclined to adopt the latter recommendation in a patient already reduced by the hæmorrhoidal flux. Plugging the rectum, and in extreme cases the actual cautery, have been advised; but neither of these means is often practicable, unless the point from whence the blood

flows can be brought into view, and then, by ligature or other means, we may be able to succeed in stopping the bleeding. When the hemorrhage is of a passive character, occurring continuously, and weakening the patient by slow degrees, the administration of the preparations of cinchona, in combination with the mineral acids, will be of service; sulphate of quinine and sulphuric acid, and the various chalybeate preparations, may also be administered.

The discharge of mucus from the bowel, which so generally accompanies internal hæmorrhoids, and is a cause of extreme annoyance to the patient, is to be arrested by the injection of cold water into the rectum morning and evening. But if the disease has existed long, and the secretion is profuse, a few grains of sulphate of zinc, acetate of lead, or tannic acid, may be added to the water.

Tumors occurring at the verge of the anus, forming external hæmorrhoids, require different treatment from those which are internal to the sphincter. In the acute stage of external piles, when they are small, hot fomentations, poultices, and the medical treatment already advised, will generally succeed in relieving the symptoms; but if they be large and tense, much time and pain will be saved to the patient by making a free incision through them, and evacuating the contained blood. The incision should be made with a small curved bistoury, in the direction from the circumference towards the centre of the anus; immediate relief will follow, and the very slight bleeding that takes place, which is rather beneficial than otherwise, is never sufficient to cause either the patient or surgeon any anxiety; the wound will heal by granulation, the skin contracts, and the parts are restored to their normal condition in a few days. But if this proceeding be neglected, permanent tumors will be formed in the manner previously described.

When these exist, they should be excised, and it is the only advisable plan of treatment; if the error be committed of applying ligatures to these as to internal piles, intense suffering will result, a striking example of which I witnessed in a case some time since. Care should be taken not to remove more of the integument than covers the tumor, or, upon cicatrization of the wounds, contraction of the anus will ensue. The usual mode of

excision is by means of a pair of curved scissors; the pile, being seized with a vulsellum or pair of forceps, is to be cut off with the scissors, the incisions radiating from the circumference towards the centre of the anus. A less painful mode of removing these tumors is by a probe-pointed straight bistoury; when the tumors are large and much indurated, they slip before the edge of the scissors, rendering a second or third cut necessary; besides, a certain amount of bruising of the tissues occurs in this manner of operating, and occasions great pain unless the patient is under the influence of chloroform. In using the knife, the incisions can be made with a greater degree of exactness: each tumor is to be held with the forceps, and incised at its base, the lower half of the incision being made first, that the blood may not interfere with our view. If the hæmorrhoid be small, it can be cut off with one stroke of the knife, but if large, the preceding plan is the better, as the removal of more of the integument than is necessary can be thus avoided. Should fissure of the anus coexist, it will generally heal after the excision of the tumors; slightly stimulating lotions and ointments will sometimes be advisable till the cure is complete.

In the majority of cases it will not be necessary to interfere surgically with internal piles, if the treatment already described be steadily pursued, and the patient strictly attends to the injunctions of his medical adviser with respect to diet and exercise. Even when the tumors are large, and have existed for some time, the use of soap and water externally, night and morning, the injection of cold water or lime-water after each dejection, and keeping the bowels easy, will enable the subjects of them to pass their lives in tolerable comfort. But when, notwithstanding the adoption of these means, the tumors continue affected with pain, wearing out the strength of the patient, or bleeding occurs to such an extent as to affect the constitution, producing the various symptoms that have been described, or that the tumors are constantly protruded, and a profuse mucous discharge kept up, it will be advisable to remove them by surgical operation. I may be permitted to repeat that it is only when the constitution suffers from the local disease we are to remove it; and we must be careful not to do so when that disease appears beneficial in warding

off those of the more important organs of the chest, head, and abdomen, which, if aggravated, might terminate fatally.

If after a minute and careful inquiry as to the existence of any hereditary predisposition in the patient to other disease, and as to his previous state of health, also to his freedom from disease of the head, of the thoracic and abdominal viscera, and after a mature consideration of the whole circumstances of the case, the propriety of an operation shall be determined on, the next question that will engage the attention is the best mode of proceeding. It is premised, that before having recourse to any surgical interference, the general health of the patient has been attended to, and the bowels thoroughly unloaded, measures that are highly important to a successful issue of the case, the neglect of which has often seriously aggravated a patient's sufferings, and led to a tardy recovery. Formerly great differences of opinion existed regarding the plan to be adopted, many eminent surgeons advocating excision, while others used the ligature. One reason for this want of agreement among those who have written on the subject depends much upon their not having drawn a distinction between internal and external piles, but applied a general rule to the treatment of both kinds. It is now, however, generally admitted, that excision is applicable only to external tumors, while the ligature, and, in some cases, the use of nitric acid, are preferable in the removal of internal hæmorrhoids. That the operation of excision itself is more rapidly performed than the application of a ligature cannot be denied; but when we take into account the frequency of hemorrhage, and the necessity of applying ligatures to the bleeding vessels, of making pressure, or of searing the wounded surfaces with red-hot irons, as practised by Dupuytren, there cannot be a question that the patient escapes on more easy terms, and even more quickly, when the ligature is used. The opponents of the ligature have imagined various evil consequences as following its application, such as phlebitis, diffuse inflammation of the cellular tissue of the pelvis, peritonitis, and tetanus; and have added instances where the application of ligatures was followed by fatal results: but on investigating such cases these results will be found to have arisen from other causes, or that the previous condition of the patient did not justify surgical interference.

Several surgeons of eminence at one time had recourse to excision, but were led to abandon the plan by fatal effects following it. Sir Astley Cooper[1] says: "For excision, in the early part of my surgical career, I was a strong advocate; for I found it a less painful operation than ligature, and it appeared to me not dangerous; but as my experience increased, I was induced to change my opinion, and to consider excision as not divested of danger." Sir Astley then records three fatal cases: the first the wife of a surgeon, the second a gentleman from Guernsey, and the third the Earl of S——. Sir Benjamin Brodie[2] remarks: "With respect to internal piles, then, there is no objection to the ligature, while there is the greatest objection to their simple excision. This is the doctrine which I was taught by Sir Everard Home in this hospital when I was a student. But I met with a copy of Mr. Cline's *Lectures on Surgery*, in which he stated he removed internal piles by excision; and this observation was added, 'A timid surgeon removes them by ligature.' Knowing Mr. Cline to be a very cautious practitioner, I thought in what he recommended there could be no kind of danger, and for some time, therefore, I was led to follow his suggestion. In the first one or two cases I found no inconvenience to arise from my altered practice; but then a case occurred in which the patient lost a great deal of blood; in another case the hemorrhage was so great that the patient nearly died; and then a third case occurred, in which also the patient lost an enormous quantity of blood, so much, that I now only wonder that he did not actually die. Since then I have never removed large internal piles except by ligature." Mr. Syme,[3] after referring to Sir Astley Cooper's cases, adds: "If other practitioners had been equally candid, we should doubtless have had more testimony as to the danger of this operation; and every surgeon who has practised it must have experienced more or less alarm. Before my own views were settled as to the best means of treating the disease, I, on one occa-

[1] "Lectures of Sir Astley Cooper, Bart., on the Principles and Practice of Surgery, with additional Notes and Cases," by Frederick Tyrrel, 1825, p. 342.

[2] "Lectures on Diseases of the Rectum," by Sir B. C. Brodie, "Medical Gazette," vol. xv. p. 843.

[3] "On Diseases of the Rectum," by James Syme, F. R. S. E., Third Edition, 1854, pp. 77, 78.

sion, cut away an internal hæmorrhoid, which was partially protruded, and I found it necessary to employ manual pressure for several hours to restrain the bleeding that followed. In another case I succeeded in securing the vessels by ligature." Dr. Bushe[1] also enters his protest against the excision of internal piles, in the following words: "I have performed the operation several times, and after it had to tie up arteries, plug the rectum, and in one instance to apply the actual cautery. Indeed, I so nearly lost two patients, that when left to my own choice I no longer have recourse to this operation." Latterly, an attempt was made to revive excision, and to substitute for the actual cautery the application of nitric acid to the bleeding surface. This would certainly be productive of as much pain, without the security from hemorrhage obtained by the use of the hot iron. With the intention of obviating the danger arising from excessive bleeding, removal of internal piles by means of a platinum wire, heated to incandescence by the galvanic current, was suggested and tried, but in practice was not found to possess the advantages imagined. Besides, I presume the burning by this means would not be less painful than by Dupuytren's method, and certainly the operation would be less expeditious.

But if, for any reason, this plan of operation should be preferred, it is to be performed in the following manner: The bowels having been unloaded by the administration of mild purgatives, an enema of thin gruel should be administered some little time previous to the operation, in order to make the tumors protrude at the anus, or the patient may be desired to sit over hot water in a close stool, and strain till they are prolapsed. He should then lean across a table opposite a good light, or he may lie on a couch or bed, with the nates projecting over the edge, and his thighs flexed on the abdomen: the buttocks are to be separated by an assistant, and the surgeon, grasping the pile in the blades of a vulsellum or pair of forceps with the one hand, excises it with a pair of curved scissors held in the other; each tumor is thus to be cut off, taking care not to remove any of the mucous membrane that is uninvolved in the affection. Should profuse bleeding result, pressure by means of the finger must be made;

[1] Op. cit., p. 183.

if, after a short time, this does not succeed in arresting the hemorrhage, it will be necessary to dilate the rectum with a speculum ani, and secure the bleeding vessels by ligatures; or, if this cannot be accomplished, Dupuytren's method of applying the actual cautery to the part may be necessary. So frequently did this surgeon find it requisite to have recourse to such means of arresting bleeding, that he had irons of various shapes and sizes for the purpose. Elevating the pelvis, and applying bladders, containing pounded ice and salt, to the sacrum and anus, will assist the other means employed. Plugging the rectum in the ordinary manner is very objectionable, as bleeding may continue internally, unobserved by the attendants, till the patient is exhausted. If it be deemed advisable to have recourse to compression, it is best made by an oval-shaped bladder of India-rubber, which can be inflated by means of an elastic tube connected therewith. Bushe invented an instrument for arresting bleeding from the wound made in lithotomy, and recommends it in cases of hemorrhage from the rectum following the excision of piles: it consists of a tube closed at one end, the other being open, and furnished with a stopcock: the sides of the tube are perforated with holes, and a portion of intestine surrounds it, which is secured at each end by wax thread. The instrument being introduced into the bowel, the intestine is inflated through the tube, and the air retained by turning the stopcock. After the operation a dose of opium should be administered, with the object of tranquillizing the system, and of preventing the action of the bowels for two or three days. At the expiration of that time a dose of castor oil must be given, and the bowels afterwards kept open by repeating it as often as occasion requires, or the lenitive electuary or other aperient may be substituted. Emollient enemata during the treatment are very essential, and will be productive of much benefit and comfort.

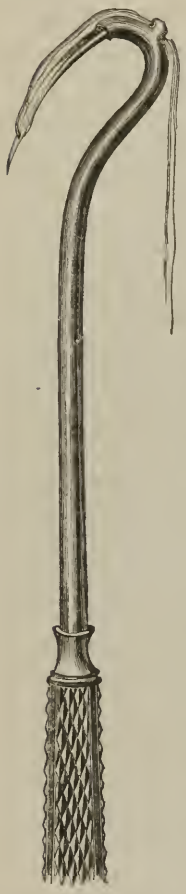
From what has been stated, it is quite evident that excision of internal hæmorrhoids is neither safe nor advisable, and that other means must be had recourse to. When the tumors are large, no plan for their removal is so effectual as the ligature, which, if properly applied, occasions but little pain, and the operation does not occupy more than a few minutes. From extensive practical experience, I can amply testify that this method is entirely free

from the evil consequences mentioned by some writers, provided the necessary precautions previously pointed out have been attended to. In this belief, I am supported by the evidence of gentlemen whose eminent position in the profession has afforded them a wide field for observation and practice, and whose opinions command the highest respect. In a recent consultation with Sir Benjamin Brodie, respecting a patient who was suffering from piles, complicated with prolapsus, he remarked: "The ligature is a perfectly safe proceeding." He added he had lost three patients after the operation; but two of them had albuminuria, and occurred before he had become acquainted with the pathology and important alterations in structure of the kidneys inducing that state of the urine, which the valuable researches of Dr. Bright and subsequent investigators have, since then, so ably and clearly demonstrated. In the third case, Sir Benjamin at first refused to interfere, on account of the patient's broken-down constitution; and it was only at his most urgent request, and after all the unfavorable circumstances had been pointed out to him, that he consented to perform the operation. That other fatal results have ensued upon the application of the ligature is admitted; but in these cases it will also be found the general health of the patient, or the presence of serious disease of the kidneys or other important organs, rendered the operation unadvisable. It is such cases that are adduced as militating against the practice of applying the ligature, by those who put forth some peculiar but generally not very original plan of treatment.

Some surgeons include the pile in a single noose; but the method is unadvisable, for, unless the hæmorrhoidal tumor is connected by a very narrow peduncle, the ligature cannot be drawn sufficiently tight to cut off effectually all vascular and nervous connection, whereby the parts are longer in separating, and a greater degree of inflammation is induced. Mr. Mayo[1] mentions a case in which he operated, and included some large tumors in single ligatures which had not the effect of completely strangulating the parts, and he was obliged to apply others after a few days; a proceeding that must of necessity have been very painful from the inflamed condition of the piles at that time.

[1] Op. cit., p. 70.

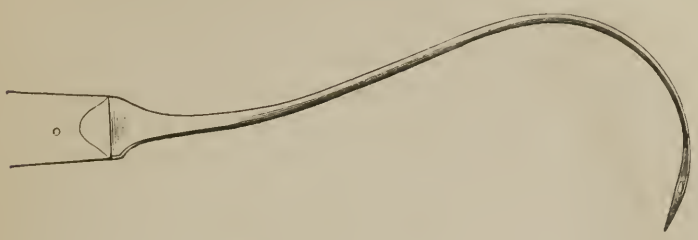
But another important objection is the liability of the ligature to slip off: this occurred in several cases recorded by Mr. Howship;[1] and, although the disease was ultimately removed by the excessive inflammation set up, it was at the cost of much suffering to the patient. Another illustration of the evil arising from this mode of applying the ligature was mentioned to me by a professional friend, who had the opportunity of observing the case. A gentleman was recently operated on by a hospital surgeon, who included a large hæmorrhoid in a single noose, the result of which was that the ligature slipped off, rendering a second operation necessary; the same thing again occurred, and a third ligature was applied: by these repeated operations the patient suffered severely, and was confined to his bed for several weeks. To obviate these objections it is better always to pass a double ligature through the base of the tumor, and to tie it in two portions. Dr. Bushe[2] invented an instrument which may be useful in some cases. The annexed woodcut accurately represents the form of the instrument: the needles fitting into the needle-receiver vary from half an inch to an inch in length. The following is the manner of using it: The needle, being armed with a double ligature, is made to transfix the tumor through its centre, which is then to be grasped by a pair of forceps, and withdrawn from the socket of the holder. All this can be accomplished without entangling the needle in the surrounding parts; because, the convex portion of the needle-carrier being alone opposed to the prolapsed parts, it pushes them out of the way without injury, and thus makes room for the ascent of the needle, so that it can be seen precisely where to enter its point. The needle I generally use is fashioned like a nævus



[1] Op. cit.

[2] Op. cit., pp. 188, 189.

needle, but having a greater curve, as represented in the subjoined woodcut, and with this the tumor is transfixed from above



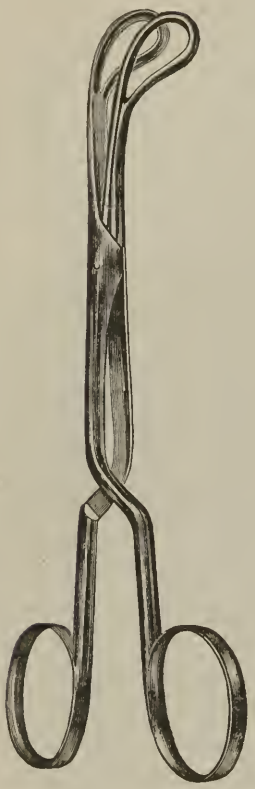
downwards. In some cases the tumor is more conveniently transfixed from below, then a needle having a less curve is preferable.

The ligature should be of strong dentist's silk, or, what I prefer, an even and fine hempen cord: whichever is used must be well waxed, that it may not be acted on by moisture, and that the knot may not slip. The length should be about twenty inches: it is also a good plan to have one-half stained, whereby, after the division of the ligatures, the respective ends are readily distinguished.

The patient is to be placed in the same position as that described for excision, and the tumors made to protrude by the means previously directed.[1] The buttocks are then to be held apart, and the surgeon, grasping the tumor to be operated on with a vulsellum, or by that which is the preferable instrument, a pair of forceps of the form represented in the following woodcut, makes sufficient traction to bring the base of the hæmorrhoid into view: if its attachment is below the upper margin of the internal sphincter I have long had recourse to incision of the lower portion, a proceeding possessing great advantage, whereby irritation is much lessened, the patient saved pain, and the ligature separates earlier. It is most essential to adopt this plan of operating when the marginal integument is implicated in the disease, for if any portion of the skin is included the pain occasioned is intense. The incision being made, the armed needle is carried through the centre of the base of the tumor, which being

[1] Page 107.

accomplished, the ligature is divided and the needle withdrawn. The ligatures are now to be tied, and they must be drawn as tight as possible, so as effectually to interrupt all vascular and nervous connection whereby vitality at once ceases in the included tissues, and nature throws them off as speedily as possible. Sir Astley Cooper recommended that the ligature should not be drawn tight, thinking thereby to lessen the pain and irritation; but he erred in his supposition, and produced that which he was desirous of avoiding. Care is requisite to include the whole of the tissues affected, but not to encroach on the healthy structures: this is readily done by fixing the margin of the tumor with a tenaculum, sharp hook, or holding it with forceps. With the same object it has been proposed to transfix the piles with various kinds of pins, withdrawing them after the ligatures are tied. But there is no advantage in this, as the plan I adopt fully answers the purpose, is more expeditious, and the patient escapes the pain passing several needles necessarily occasions. A recent author does not think so much care requisite. He says: "It is not necessary to be particular to include in the ligature every portion of the morbid growth, as the contraction that ensues in healing is sufficient to reduce any part that has escaped the ligature." This is a great error, and may possibly account for so many of his cases not being perfectly satisfactory.



It is seldom there are more than three or four tumors, and these must be operated on at the same time, otherwise the irritation produced by the ligature of one of the hæmorrhoids will cause inflammation to attack the tissue of others, which, from being in a morbid condition, is rendered more liable to it than the healthy structures. After the knots have been made fast, the

ends of the ligatures must be cut off half an inch from them; and the parts returned within the anus. Some have advised that the piles should be clipped off near the ligatures, but there is no necessity for it; they soon become flaccid and shrink; besides, to do so would endanger the ligatures retaining their hold.

The ligatures generally separate from the sixth to the tenth day; no advantage is to be gained by pulling at them or interfering with them in any way: they are sure to be thrown off in proper time. I have known instances of their being pulled off prematurely, to the manifest disadvantage of the patient: it must be recollected, they are placed under different circumstances to ligatures attached at the bottom of deep wounds, as in amputations of limbs, and in other great operations: in such cases gently twisting them occasionally is advisable, if they have not become loose at the usual time for their separation.

Nitric acid as an agent in the treatment of hæmorrhoids has recently been brought prominently before the profession with an air of apparent originality, and its utility unduly extolled: its use was first advocated by Mr. Cusack; and Dr. Houston,[1] at the commencement of his elaborate paper on the subject, published twenty years since (1843), and referred to in the previous editions of this work, accords the originality to him in the following words:—

"The name of my distinguished friend, Mr. Cusack, I am particularly desirous of mentioning in connection with this subject, because the employment of nitric acid in such cases has not only the high sanction of his approval, but to him, in an especial manner, is due the first suggestion of its use as a remedy."

I have used nitric acid, also the deuto-nitrate of mercury for many years, and found them very effective in appropriate cases. When the part of the mucous membrane morbidly affected is of limited extent, does not rise much above the surrounding healthy surface, and presents the characters of the third variety of hæmorrhoidal tumor I have described, either may be applied with safety and advantage, but it may not be used to the other forms of hæmorrhoids, or weeks of suffering and other serious evils will be produced, as has occurred in several instances that have come

[1] "Dublin Journal," vol. xxiii. p. 94.

under my observation. The case being an appropriate one for treatment by nitric acid, the diseased portion of the mucous membrane is brought into view either by the dilatation of the anus by a speculum, or by being made to protrude externally; the acid is then applied, and the effect judged of by the change in the appearance of the tissue, which will lose its natural color, and become of a grayish-white. An alkali in solution is to be used to neutralize the excess of acid, and prevent its action on adjoining structures; the parts then being smeared with oil, the operation is finished. A small piece of lint wound round the end of an eye-probe is a convenient mode of applying the acid. Dr. Houston[1] directs a piece of wood shaped like a spatula to be used; others recommend a glass brush, but a probe and lint are always at hand, and answer best. The pain occasioned by the operation is not great; but care must be taken that the acid is not permitted to come in contact with the skin at the margin of the anus, or the converse will occur. The eschar produced by the acid will separate between the third and sixth day, leaving a healthy ulcer; at this time the patient will experience some smarting when the bowels act. The after-treatment is to be the same as when the ligature has been applied.

But the acid does not always succeed, even in those cases to which alone it is applicable. In 1858 I operated on a young lady, patient of Mr. Chappel, of George Street, Hanover Square. Previously she had lost considerable quantities of florid blood per anum, and had become perfectly anæmic and highly nervous. A vascular excrescence, about the size of a fourpenny-piece, existed at the posterior part of the rectum, with which a large arterial branch communicated, and could be felt strongly pulsating. I applied nitric acid freely, and to all appearances effectually. Her health greatly improved, and she remained free from all local disease for about three months, when considerable hemorrhage again occurred, and an examination revealed a recurrence of the vascular growth. Being satisfied no advantage would ensue from again applying the acid, I had recourse to the ligature, with complete success, there being no return of the disease. In the spring of 1862 I operated by ligature on the

[1] Op. cit., p. 104.

sister of this young lady, and in her also the rectal arterial branches were highly developed.

Other escharotics have at times been introduced, and for a time became a fashion in the treatment of hæmorrhoids, but failing to realize the advantages their advocates would induce others to believe, either from their deliquescence, the impossibility of limiting their action, or other reasons, they deservedly fell into disuse. I have seen cases in which the nitrate of silver and sulphate of copper have been applied; but these salts are not of the slightest service in removing the morbid tissues, though they may palliate the symptoms when not severe.

M. Amussat advocates what he terms the circular cauterization of the base of hæmorrhoidal tumors, which he effects by means of variously constructed forceps, the blades of which are charged with Fulcho's caustic. The advantages of the plan are not very apparent; and when we are told it is necessary to irrigate the parts with cold water for several consecutive hours, and that one patient, to relieve the pain, sat in a cold bath for a week, it is one not likely to be generally adopted.[1] Another plan for the removal of hæmorrhoids, and other growths, emanated in Paris, and became a fashion for a time, but happily, in England at least, is now little practised. I allude to their ablation by that crushing, lacerating, and unscientific machine, the écraseur, which, in appearance and operation, suggests the idea of belonging rather to the torture-chamber of bygone ages than of being an instrument of modern surgery. M. Nélaton reports that many who have been operated on by it are now the victims of traumatic stricture of the rectum.

When external piles exist with internal ones, they must be excised at the same time that the others are operated on, or they will become inflamed by the irritation which necessarily follows, and occasion extreme pain and annoyance. But it is highly essential that a correct diagnosis be made between external piles and the œdematous swelling of the margin of the anus, induced by the condition of the internal piles: for if an error is made, and the œdematous integument removed, the serious evil of contraction of the anus will ensue on the cicatrization of the wounds.

[1] "New York Journal of Medicine," vol. xv. pp. 111—282—411.

Whether excision, ligature, or the application of nitric acid be had recourse to, a dose of opium should be administered after the operation, and in this there is a double intention to be answered, the one to tranquillize the system and allay pain; the other, and the chief one, is to lock up the bowels for a day or two, to prevent the irritation that would be produced by their action. On the third day, if the bowels are not moved of their own accord, an aperient must be administered and repeated every second day, if necessary.

For the first two days the patient must be confined to his bed; on the third day, according to circumstances, he may be allowed to leave his room, and lie on a sofa; about the fifth day he may begin to move about, and, if the weather permit, he may take a gentle walk, or a drive in a carriage.

The diet for three or four days must consist of sago, arrow-root, barley-water, beef-tea, mutton, veal, or chicken-broth: when the patient begins to walk about, some solid food may be allowed, but great moderation must be observed.

When the ligatures have come away, or the eschar produced by the action of the acid separates, leaving an ulcerated surface, the injection of four or six ounces of water, with two grains of sulphate of zinc to the ounce, will expedite its healing; but I generally prefer the use once or twice a day of some mildly stimulating ointment: I apply it by means of a glass syringe having a jet with a large aperture, which saves the patient the pain and annoyance caused by the usual way of dressing the ulcers with strips of lint smeared with the ointment, and passed into the bowel on a probe.

Occasionally it happens, on the second or third day following the operation, that the patient experiences some difficulty in micturating; a dose of hyoscyamus, with nitric ether, in camphor mixture, and a hot hip-bath will generally remove these symptoms. Should these means, however, not succeed, and retention of urine supervene, it will be necessary to introduce the catheter; but we shall seldom be called upon to do so: nevertheless, the bladder must not be allowed at any time to become over-distended.

In the treatment of ulceration of piles, it will generally be

advisable to remove them: if they are external, they must be excised: if internal, the ligature or nitric acid must be employed.

When fissure of the anus exists as a complication, it will usually be found accompanying the external form of hæmorrhoids. The tumors must be excised, and a mild astringent ointment, with or without the extract of belladonna, applied, according as there is spasm of the sphincter muscle or not. If this be insufficient to heal it, it will be necessary to have recourse to an operation.

If abscess takes place in connection with piles, an early and free incision must be made, otherwise fistula in ano may result.

The protrusion of large internal piles from the anus causes the patient great annoyance, and at times is alone sufficient to induce him to seek surgical aid. At first the protrusion only takes place at stool, but in the progress of the disease, the sphincter becomes relaxed and the anus dilated, so that they fall down when the patient makes the slightest exertion, or even on his assuming the erect posture. If no contra-indication exists, the removal of the tumor or tumors is the best treatment; but if this is not admissible, six or eight ounces of cold water must be thrown up the bowel twice or thrice a day; various astringents may be added to the fluid, such as sulphate of zinc, alum, acetate of lead, tannic acid, &c.

Surgical mechanicians have invented various instruments for the prevention or cure of piles, but they succeed in accomplishing neither; however, their contrivances are useful in assisting to prevent the protrusion, and the discomfort arising therefrom, when it is unadvisable to remove them by operation.

It has been recommended to make temporary pressure on internal piles, by the introduction of a bougie into the rectum, and retaining it there for an hour or longer every day; but whenever success has appeared to follow the proceeding, it has been due to the constitutional treatment that has been adopted at the same time, and not to the use of the instrument. Those who advocate this plan, entertain the idea that internal piles are dilated veins, and that as pressure is beneficial in dilatation of the veins of the leg, it must also be beneficial in these cases; forgetting that the rectum is surrounded by yielding parts, and the impossibility therefore of making firm and equable pressure: they also

overlook the fact that in the varicose condition of the veins of the leg, pressure is only useful so long as it is continuously applied; that the bandages require great nicety of adjustment to afford the desired relief, and, even after their use has been unremittingly persevered in for years, the veins remain in the same dilated condition, and all the miseries attending them return if the bandages are left off only for a few hours.

When the patient begins to regain health and strength, he must avoid all the causes that induce the disease from which he suffered. He must live sparingly, and be careful to keep the bowels regular: he must take as much exercise, short of fatigue, as he can, so that the skin, and other excretory organs may fully perform their functions and prevent plethora. If these means are insufficient, or, if by neglect of the advice given him, and returning to former habits of indulgence, he is threatened with congestion of any of the organs in the head, chest, or abdomen, the feet should be immersed every night in hot water and mustard, and the bowels should be freely acted on: a dose of calomel and jalap will be the best to commence with, afterwards a few grains of blue pill, or gray powder, with a grain of ipecacuanha, may be taken at bedtime, and a purgative draught in the morning—as the compound infusion of senna, with decoction of cinchona, or potassio-tartrate of soda in infusion of calumba. Blood may be taken by cupping from the region of the organ threatened, or from the sacrum and perineum.

Having detailed the plan of treatment of hæmorrhoids, in conclusion I will briefly recapitulate the principal points. That many cases will yield to judicious medical treatment; that when it fails, presuming the patient is free from serious organic disease, the hæmorrhoidal tumors may be removed with perfect safety, and a moral certainty of a successful result, provided that any defects of the constitution have been remedied, and the bowels freely unloaded previously to the operation being performed. That in cases of external hæmorrhoids and internal ones implicating the integument, excision and incision is the only proper operative treatment. That to internal hæmorrhoids the ligature should be used, except to the vascular excrescence of the mucous membrane I have described, and to which nitric acid may be applied. By acting on these principles, patients may be relieved

from these affections effectually and with perfect safety, and that pyæmia, tetanus, and other serious consequences are not by any means likely to occur.

The following cases will illustrate the different phases of hæmorrhoidal affections, and the treatment:—

External hæmorrhoid treated without operation.

Mr. ——, tall and stout, generally takes moderate exercise, and lives temperately. Some years since suffered from fistula in ano, and was operated on by Mr. Copeland: an external pile was removed at the same time. He consulted me on the 5th of May, 1853, fearing his former malady was returning: for several weeks he had not taken his usual exercise, and had lived rather more highly. The last few days of April he had experienced itching and fulness of the rectum, and ultimately a lump formed: he then sought my advice. On making an examination I perceived an external pile on the left side; it was tense, of purple color, and but very slightly painful: no internal hæmorrhoids existed. His tongue was slightly furred and large, face somewhat flushed, conjunctivæ congested, pulse full.

Ordered some alterative pills at bedtime, and an active aperient to be taken in the morning. The anus to be washed with water and yellow soap night and morning.

All inconvenience subsided on the second day after I first saw him; the tumor was flaccid, and was contracting. The pills and draught were continued for a few days longer; he uses ablutions twice a day, and has had not the slightest symptom of any affection of the rectum since.

External hæmorrhoid; incision of the tumor; rapid recovery.

W. C——, æt. thirty-seven, a saddler; an out-patient at University College Hospital, in the summer, 1845; of ordinary stature and conformation, bilious temperament: works hard at his business, sitting ten hours a day; lives well, and is in the habit of drinking freely of beer and spirits, but is seldom tipsy. Several days before applying at the hospital, he experienced slight itching and fulness of the anus: on the evening previously the symptoms increased; he then had throbbing and acute pain, became thirsty and feverish, and had not been able to sleep during the night. In the morning he was sensible of a tumor having formed at the margin of the anus. When he applied for advice his tongue was furred, skin hot, and his countenance indicated pain and want of rest. His bowels had been irregular, sometimes not acting for two or three days. On examination an internal pile

was presented; it was purple, tense, and very painful. Ordered to take four grains of blue pill, and one grain of ipecacuanha immediately, and an aperient draught two hours afterwards.

To foment the parts with hot water, and to go to bed.

The medicine having acted freely, on the following morning I divided the pile with a bistoury, and evacuated the contained blood: the fomentations to be continued. On the second day he resumed his business: the incision healed, and the skin contracted to its normal condition. He afterwards took for two or three weeks a tonic and aperient mixture, and by my advice abstained from spirits, and drank but a moderate quantity of beer daily.

The brother of this patient had previously been under my care for fissure of the anus.

External hæmorrhoid; tumor incised.

Mr. ——, æt. thirty; tall; of great muscular development, plethoric habit, not accustomed to take much exercise, except occasionally during the sporting season, and is capable of great exertion and endurance without fatigue. He lives freely, his general health is good; occasionally feels a fulness of the head and drowsiness; he then has recourse to a brisk purgative, which relieves him.

He sent for me in May, 1852: he was in bed, complaining of great pain at the anus; his countenance was flushed, skin hot, tongue furred, pulse accelerated, and he had headache. He informed me he had been to a succession of dinner parties, and had eaten and drunk freely, and had not felt quite well for several days: the morning before my seeing him he experienced an itching at the anus and a fulness about that region; towards evening his discomfort increased, and he began to experience throbbing and acute pain; he went to bed somewhat earlier, hoping a night's rest would relieve him. On making an examination I perceived an external pile, half an inch in diameter, spheroidal, tense, of a deep purple color, and very painful when touched. To use hot fomentations and to continue in bed; five grains of calomel and five grains of Dover's powder to be taken immediately, and a draught two hours afterwards of compound infusion of senna, powdered jalap, potassio-tartrate of soda, and spirit of nutmeg.

The medicines acted on the bowels freely several times. On visiting him in the evening, finding the pile still tense, I divided it by transfixing the base with a small curved bistoury, and cutting outward. The next day he was able to be about; the wound healed without any trouble in a day or two after. I advised him to observe moderation in living, and prescribed a tonic and

aperient draught to be taken every morning for two or three weeks.

External hæmorrhoid and fissure of the anus.

Mr. ——, æt. twenty-eight, residing in Westbourne Terrace, Hyde Park, was advised to consult me by my friend, Dr. Quain. He is of ordinary stature and conformation, living moderately, not taking much exercise; has always been dyspeptic and of costive habits: the last few years he has suffered more or less from smarting during defecation, attended with slight hemorrhage, followed by aching pain.

The attack for which I was consulted commenced the day previously, with severe throbbing pain, and great tenderness at the anus; on making an examination, an external pile, the size of a filbert, on the margin of the anus of the left side, presented: it was tense, exquisitely painful to the touch, and of a deep purple color. At the posterior part, and immediately within the margin of the anus, was a fissure about half an inch in length, appearing of recent origin, the margins being sharp and florid; the sphincter ani was slightly affected with spasm; general constitutional disturbance was indicated by thirst, loss of appetite, furred tongue, acceleration of the pulse, and by the preternatural heat and dryness of the skin. He was directed to observe the recumbent position, to foment the anus with a hot decoction of poppy-heads, to apply a piece of lint smeared with extract of conium and spermaceti ointment to the fissure, and to take at bedtime a teaspoonful of an electuary consisting of confection of senna, sulphur, jalap, bitartrate of potash, copaiba, and syrup of tolu.

On the following morning the bowels were freely moved, attended with smarting at the time. The tumor was still tense and painful; I therefore divided it, and turned out a clot of blood; bleeding to the amount of one or two drachms followed. Directed to use a sponge, and water when visiting the closet instead of paper.

The electuary and ointment were continued for a short time, and in ten days all disease had subsided; the loose skin resulting from the distended hæmorrhoid contracted entirely, the part resumed its natural condition, and the fissure of the anus had quite healed.

Dr. Quain informs me he has seen this patient (Dec. 1853), and that he has continued free from all symptoms of fissure or piles.

External piles after bilious fever; prolonged suffering from not permitting incision of the tumor.

Mr. C. C——, æt. twenty-three, convalescent, after several weeks' severe illness from bilious fever. On one of my visits he complained of great pain and throbbing at the anus, and fulness of the perineum. An examination revealed a large external pile of the size of a cherry, on the left margin of the anus; it was of a deep purple hue, tense, and very painful. Under the idea of regaining his strength more rapidly, he had for several days eaten very heartily, and taken several glasses of wine, notwithstanding he had been admonished to observe moderation in living. Ordered to confine himself to the recumbent position; to have no solid food; to use hot fomentations of decoction of poppy-heads to the anal region, and to take at bedtime a spoonful of an electuary of confection of senna, sulphur, taraxacum, and bitartrate of potash.

The next day he was no better; he had not been able to take the electuary, as his stomach turned against it; he was desired to form it into boluses of convenient size with wafer paper. I proposed dividing the pile with a bistoury, but he would not listen to anything like an operation.

By the means suggested he managed to take the electuary, and it acted freely on the following morning. The pile was still tense, but not so painful; three others, of small size, had formed on the opposite side. He was directed to continue the electuary and fomentations, and to live sparingly. Under the treatment he continued to improve, but a fortnight elapsed before he was free from pain; the pile had then collapsed, leaving a large fold of loose skin. At this time he became very nervous about himself, was restless at night, and perspired profusely. Ordered to take twice a day nitric acid with decoction of bark and syrup of orange.

In another week he was much better, and gaining strength; he left town for Brighton, where he remained for some time.

I have seen this gentleman lately; he is now stout and in good health; the loose fold of skin around the anus still exists, and may probably become the seat of disease on the occurrence of a slight exciting cause. Had he consented to the small incision requisite, I have no hesitation in saying his sufferings would have been materially less, and of shorter duration.

External piles, with ulceration of their surfaces and fissure of the anus; operation; cure.

T. R——, æt. twenty-eight, by occupation a copying-clerk in a law stationer's office, of ordinary stature and conformation, bilious

temperament. Previous to fourteen years of age he suffered from hæmaturia: since then he has enjoyed good health till the early part of 1852, when he experienced itching and fulness at the anus, and after a few weeks, smarting at stool was superadded. His bowels have been habitually constipated, and from the nature of his occupation he maintains the sitting position many hours during the day, and takes very little exercise. In June he became a patient in a metropolitan hospital: he described his symptoms, and was told he had piles. No examination was made during the two months he was there: medicines were prescribed, and he left somewhat better.

On the 11th of November, 1852, he applied at the Blenheim Dispensary, complaining of smarting at stool, followed by severe aching, which continued for some time: his sufferings were so great that he was rendered incapable of following his employment. His countenance was anxious, his pulse quick and irritable, and he was exceedingly nervous and apprehensive; his tongue was furred and large, with the impressions of the teeth deeply notched in the margin; he had tenderness at the epigastrium, and flatulence. On making an examination several external piles were seen, varying in size from a large pea to that of a bean: their surfaces were ulcerated, they were hard and tense, and fissures existed between them. On attempting to ascertain the extent of the latter internally, the introduction of the finger into the rectum brought on violent spasm of the sphincter, and induced intense pain. It was proposed he should have the tumors around the anus removed, to which he assented, but postponed the operation for a short time on account of some private affairs demanding his attention. He was directed to wash the anus with soap and water morning and evening, and to use a sponge and water at the closet after evacuating the contents of the bowels. A teaspoonful of an aperient electuary was ordered to be taken at bedtime, two tablespoonfuls of compound infusion of gentian with ammonia and bicarbonate of potash twice a day.

Nov. 28.—Had seen my patient several times since he first applied to me; his general health was now much improved, and he has experienced relief by following the treatment suggested. This day I removed six external piles, making the incisions converge from the circumference towards the centre of the anus. Mr. H. Thompson kindly rendered me assistance, and administered chloroform to the patient. About two ounces of blood were lost during the operation; no vessels required ligature, and the slight oozing that followed was easily restrained by a pad of lint and a T bandage. Before leaving he had recovered from the effects of the chloroform, and became aware of the operation having been performed by feeling slight smarting. To remain in bed.

Nov. 29.—Visited him in the afternoon. Half an hour after I

had left him he had lost all pain, and he has been quite comfortable since; his bowels not having been moved, he was ordered to take a dose of the confection which had been previously prescribed, and to apply a piece of lint spread with zinc ointment to the wounded parts.

In ten days the wounds had quite healed, also the fissures that existed between the piles: for a short time he took an aperient and tonic mixture. He regained his health, his bowels act regularly, and he has continued perfectly well since.

The severe sufferings this patient endured might have been spared him had an examination been made when he applied at the hospital, as a less routine plan of practice would probably have been adopted, and the disease cured in the first instance.

Internal hæmorrhoidal tumors in an early stage; medical treatment.

J. S——, æt. nineteen; a shoemaker; came under my care at the Blenheim Dispensary, 1853, affected with syphilitic lepra, for which a solution of bichloride of mercury and arsenic was ordered, and he progressed favorably.

On the 8th of March, 1853, he complained of having experienced, for three or four days, pain, weight, and throbbing in the rectum, increased at stool, attended with the discharge of a small quantity of blood. For several weeks his bowels have been constipated, and he has sat at work from an early hour in the morning till late at night. His eyes are dull, the sclerotic conjunctivæ slightly tinged yellow, tongue furred, and the teeth indented into the edges; pulse quicker than natural; skin hot and dry. Examining the rectum, the mucous membrane was observed to be congested, and several small purple lumps were seen immediately within the margin of the anus. I prescribed five grains of gray powder and a drop of croton oil, to be made into a pill, to be taken at bed-time. To use ablutions of soap and water after each stool.

March 10.—The pill acted freely. Has less uneasiness this morning. To take three grains of blue pill and two of extract of conium every second night and the following draught every morning: compound infusion of gentian, half an ounce; compound infusion of senna, one ounce; potassio-tartrate of soda, a drachm and a half. To continue the enemata and ablutions.

March 22.—He has continued the remedies; all the symptoms have subsided, and his general health has greatly improved. To omit the pill; to take a draught twice a week, and to continue the use of soap and water.

April 5.—Has had no return of the hæmorrhoidal affection; the mucous membrane of the bowel perfectly healthy in appearance.

Congestion of the mucous membrane of the rectum attended with great pain.

A. S——, æt. thirty-two; a carver, of ordinary stature and conformation, bilious temperament. Some years since he suffered from irregularity of the bowels, and latterly has been very costive. In the early part of Nov. 1852, he experienced great pain at stool, also aching and extreme discomfort at the fundament while at work; this was sometimes so severe as to compel him to go home. Slight bleeding from time to time has taken place. He applied at the Blenheim Dispensary, Dec. 7, 1852, complaining of great pain at the fundament. On examination and separating the margin of the anus, the mucous membrane was observed to be congested and the hæmorrhoidal veins turgid. Digital examination revealed no distinct tumors. The speculum ani showed the whole mucous membrane within the limits of the internal sphincter in the same condition as at the margin of the anus. His tongue was coated and notched, the countenance heavy and anxious, pulse more frequent than natural; his bowels had not been moved the last two days. Five grains of gray powder and one drop of croton oil to be taken every night. To wash the anus night and morning with yellow soap and water, and to use half a pint of cold water as an enema after each dejection.

He took the pill prescribed on the three following nights: the bowels were freely acted on, and he felt much less fulness and aching in the rectum. Ordered to omit the pill, and to take a teaspoonful of a laxative confection every night; to continue the ablutions; and to use the enemata of cold water.

In three weeks he was free from all disease; and by having recourse to the electuary occasionally, if the bowels are at all confined, he has since continued perfectly well.

Internal hæmorrhoids; constitutional treatment.

The Rev. ——, æt. sixty-five, residing in Surrey, of moderate stature and healthy appearance, for some years has had at times hemorrhage from the rectum when the bowels were evacuated, preceded by a sense of fulness and discomfort in the part. The symptoms have always been aggravated on his visits to town, when he is induced to enter into society, and live rather more freely than he is generally accustomed to. By examination, I detected a small internal hæmorrhoidal tumor, the mucous membrane was congested, and two loose folds of integument existed on the right margin of the anus, the remains of external piles. He was ordered to take a teaspoonful of electuary at bedtime,

and eight ounces of cold water to be injected into the rectum after each dejection.

By taking the electuary occasionally, continuing the enemata of cold water, and avoiding living too highly, he has been free from hemorrhage and pain.

External and internal piles; considerable bleeding, palpitation of the heart, &c.

A. A——, æt. fifty-six; married, of moderate stature, very stout. Applied at the Blenheim Dispensary, Oct. 2, 1862, in consequence of considerable losses of blood per anum when at stool. She appears exsanguinated; her lips, gums, and tongue are colorless; the countenance is anxious and sallow; pulse quick, weak, and irritable; and she complains of violent palpitation of the heart, induced by slight exertion. She has long been of constipated habit of body, and has not taken much exercise for several years.

The present attack commenced by itching of the anus, followed by a feeling of fulness, throbbing, and acute pain, the latter extending up the sacrum and down the inside of the thighs. Hemorrhage took place, and after it had occurred a few times the feeling of fulness and pain became much less. On making an examination, the margin of the anus was observed surrounded by external piles in a state of semi-distension: digital examination of the bowel demonstrated an internal pile on the right side, the size of a cherry, and having a broad base. I directed her to return home, and to confine herself to the recumbent position. To have an enema of a pint of thin gruel thrown up the bowel at once, and to take at bedtime a teaspoonful of an electuary containing copaiba.

Oct. 3.—The enema brought away a quantity of indurated feces. The bowels had acted twice this morning, attended with hemorrhage. To continue the electuary at bedtime, and to use half a pint of cold water, containing a scruple of tannic acid, as an enema after each stool.

Oct. 6.—She loses much less blood at stool: the confection moves the bowels twice a day. To inject cold water only after defecating, and to use soap and water externally night and morning.

Oct. 16.—But slight bleeding now occurs. She is much troubled with flatulence. To continue the enemata of cold water and ablutions. To take every night, seven grains of compound rhubarb pill, two grains of blue pill, and two grains of extract of henbane; and twice a day one ounce of compound infusion of gentian, five grains of carbonate of ammonia, and a drachm of compound tincture of cardamoms.

Oct. 20.—Since I saw her no bleeding has occurred: her countenance is brighter, her tongue clean, and the bowels act regularly. The external piles are collapsed, leaving an irregular fold of integument, half an inch in length, around the anal margin.

April 7, 1853.—This patient continues free from all pain and inconvenience; she takes the pills occasionally, and has not omitted to observe ablutions with soap and water night and morning.

Strangulated internal piles, preceded by excessive hemorrhage.

D. B——, æt. thirty-four, a jeweller, applied at the Blenheim Dispensary, Sept. 27, 1852: he is above the average height, of ordinary conformation, bilious temperament, complexion unhealthy, habitual state of mind melancholy, habits of life irregular. He has suffered for fourteen years from external piles; during the last four years has lost a considerable quantity of blood from the rectum, and has experienced great pain within the gut.

The present attack commenced on Sept. 25th, with excruciating pain in the rectum, aggravated at stool, and attended with copious hemorrhage. His countenance and lips are pallid, pulse feeble and quick, skin dry and hot, tongue furred. On making an examination, I perceived four internal piles prolapsed and tightly embraced by the sphincter; the thin integument around the anus raised in folds. Ordered him to go home and to bed. I visited him at his house, and returned the prolapsed piles: in doing this it was necessary to make very firm and continued pressure. To be cupped over the sacrum and on the perineum. An ounce of castor oil to be taken immediately, and hot fomentations to be applied to the anus.

Sept. 30.—He is in less pain; the bowels have acted twice; the piles are prolapsed: they were returned with greater facility than yesterday, and were less congested. Three grains of gray powder and four of Dover's powder to be taken at bedtime, and a teaspoonful of a purgative electuary in the morning. To continue the fomentations, and to return the piles should they be prolapsed at stool.

By observing the treatment directed, the acute symptoms soon subsided. I proposed removing the tumors by ligature; but being free from pain, he preferred waiting the chance of another attack. Ordered him to use soap and water externally night and morning, and to inject half a pint of cold water after each dejection.

Dec.—By following the injunctions given him he has been free from pain, but the tumors are occasionally protruded, and he has lost from time to time a small quantity of blood.

Nov. 1853.—At the present time I have a patient under my care with a very close stricture of the urethra, who was acquainted with D. B——: he informs me that he died a few months since of some acute disease of the chest, following a drunken bout and exposure for several nights. He was very clever at his business, but seldom worked more than three days in the week; the remainder he spent in debauchery.

Internal hæmorrhoids; much loss of blood, attended with giddiness and drowsiness; oxaluria; relief by medical treatment.

R. R——, æt. thirty-eight, was advised to consult me by my friend, Mr. William Bennet, surgeon to the Bloomsbury Infirmary. About fourteen years since he first suffered from external piles, which have continued to trouble him more or less up to the present time: eight years ago he experienced pain within the anus, and a sensation of the presence of a foreign body; defecation was difficult, attended with increase of pain and hemorrhage, and from that period he has continued to lose a considerable quantity of blood at intervals: he has also been annoyed by a constant discharge of mucus from the bowel. He has always been subject to constipation, and suffered from flatulence, pain in the abdomen, giddiness of the head, and depression of spirits. His habits of life are temperate.

He came to me on the 10th of Nov. 1852; his countenance was sallow, eyes dull, lips and gums pale, tongue furred, pulse frequent and irritable, bowels acting scantily and irregularly; has little power of retaining his feces during any violent exertion; the bladder is irritable; and he has some difficulty in micturating. The anal orifice is surrounded by a margin of loose skin, evidently collapsed external piles; the sphincter ani is relaxed. Introducing the finger within the intestine, two large internal hæmorrhoids were felt; these were extruded by a very slight effort at straining, and the mucous membrane was then seen in a granular state. He informed me that the hæmorrhoidal tumors descended by walking or riding in any vehicle that shook him much. To take six grains of extract of taraxacum and three grains of blue pill every night, and in the morning a teaspoonful of an electuary compounded of confection of senna, sulphur, bitartrate of potash, jalap, copaiba, ginger, and a sufficient quantity of syrup. To use ablutions of soap and water night and morning.

Nov. 14.—He has taken the medicines ordered, and the bowels have acted every day, but not freely; he passed some clots of blood yesterday, and this morning a tablespoonful of bright blood. To continue the remedies.

Nov. 17.—He has had very little pain, and passed but a small quantity of blood; still complains of drowsiness and giddiness.

Examination of the urine demonstrated an excess of urea, and under the miscroscope numerous crystals of oxalate of lime were seen.

Ordered a mixture of a bitter infusion with sulphate of magnesia and sulphuric acid, and to inject half a pint of water, containing sixteen grains of sulphate of zinc, after each evacuation of the bowels.

Dec. 1.—He has taken the medicines regularly, and used the enemata as directed: feeling so much better, he did not think it necessary to see me at an early period. He has had no sanguineous discharge the last twelve days; a slight mucous discharge continues. He can now retain his feces during exertion; he was drowsy on one occasion since his previous visit to me, but is not so now. His eyes are bright, countenance clear, pulse 76; the irritability of the urinary organs has ceased.

Dec. 15.—Has continued the medicines, and expresses himself as feeling better than he has for many years; his countenance is clear and healthy, pulse regular, appetite good. He does not suffer from flatulence; has gained strength, and does not feel fatigue after an ordinary amount of exercise. To inject cold water only after each stool.

This patient visited me in May, 1853; he had continued to take the medicines occasionally, and had not omitted the injection of the cold water: the only annoyance he experiences is a mucous discharge from the anus. I examined the bowel: the internal piles are still large, but not turgid; the mucous membrane is in a much healthier condition. Removal of the piles was advised in the first instance, but his occupations prevented him laying up for a few days; and as he now suffers but little comparative inconvenience, he is content to remain as he is.

Internal hæmorrhoids; loss of blood; cessation of the catamenia; health restored without operation.

Miss——, æt. twenty-two, of ordinary stature and conformation: her health had declined three years previously to her coming under my care. The menses appeared when she was sixteen, and continued regularly until she was nineteen; they then became scanty, and twelve months afterwards ceased altogether. She became pale, lost flesh, suffered from dyspepsia, had frequent headaches, and was extremely nervous. Change of air had been tried, and she had been under medical treatment at various places.

On questioning her as to her symptoms and state of the bowels, I learned she had always been costive, and at the commencement of her indisposition she had pain and a feeling of fulness in the lower bowel, which increased in severity: after a time she lost

blood per anum when the bowels were moved, the quantity increasing with the persistence of the disease, and the last two years she never visited the closet without losing more or less. She had not mentioned the circumstance to her mother, or to any of the medical men under whose care she had been: the reason she assigned for not having done so was that she had never been questioned on the subject. She was perfectly anæmic; her pulse was feeble and irritable; she had frequent headache, which was increased by walking, or even by sitting upright: her extremities were cold, the eyes dull, tongue furred, the countenance had a waxy, unhealthy appearance; the abdomen was hard, and the bowel slightly descended at stool. I made an examination, and found two hæmorrhoidal tumors. Medicines and enemata were prescribed to unload the bowels, afterwards an astringent injection was used after each evacuation, for which cold water was substituted in about a fortnight. Chalybeates and laxatives were then ordered: and under this plan of treatment she perfectly regained her health and strength, and was able to resume the equestrian exercise she had previously been accustomed to.

Internal and external hæmorrhoids induced by stricture of the urethra; excision of external piles; subsidence of internal piles by cure of stricture.

G. B——, æt. forty-three, married, of robust constitution; for a long period had observed the stream of urine decrease in size, and for some months before applying to me it had not been larger than a small crowquill, and if the weather was wet or cold he passed it in drops only; he had frequent desire to urinate, and was obliged to get out of bed several times each night: during micturition he strained violently. For nine months he had suffered from internal and external piles, attended with frequent paroxysms of pain and bleeding. Although suffering much, he had neglected the stricture of the urethra: he sought my advice for the affection of the rectum. Tracing the progress of his maladies, I conceived the hæmorrhoids to have been induced by irritation and determination of blood, excited by the disease of the urethra, and the straining that attended micturition; therefore it was necessary to relieve that affection before benefit could accrue from treatment of the piles. With some difficulty a No. 2 catheter was passed through the stricture; by the introduction of others, gradually increasing the size, the canal was ultimately restored to its proper calibre: during this treatment the bowels were kept open by laxatives: ablutions of soap and water were used night and morning. When the urethra was sufficiently dilated to permit the urine to pass without any straining, and the

irritability of the bladder had subsided, half a pint of cold water was injected into the rectum night and morning, after defecation, with the effect of arresting the hemorrhage. The two external piles that existed were hard, and occasionally painful, and if he walked much were liable to get slightly excoriated: they were therefore excised; the wounds healed readily: by attending to keep the bowels easy, and continuing the injection of the cold water, the symptoms of the internal hæmorrhoids subsided. There being a disposition in the stricture of the urethra to contract, a bougie is passed once or twice, at intervals of a few weeks.

Internal hæmorrhoid; loss of blood inducing suppression of the menses: leucorrhœa; nitric acid applied to the pile; health restored.

M. J——, æt. twenty-seven, married four years, has no family. Tall, and of ordinary conformation. Her habits are sedentary; previous to her marriage she followed the occupation of a dressmaker; she had suffered much from dyspepsia and constipation. About the end of 1849, she began to experience discomfort in the rectum, having a sense of fulness and aching in the part; these disagreeable sensations increased, and in a few months resolved themselves into acute pain, which was aggravated after a motion; the bowels acted very irregularly, sometimes not for several days, at other times diarrhœa supervened. In a short period after the accession of acute pain, she began to lose blood per anum; the quantity increased, and varied from a tablespoonful to half a pint; at times it was florid, at others dark and clotted. The menses became irregular, and at length ceased, and she was troubled with leucorrhœa. She had had advice, and taken various medicines, such as confection of senna, blue pill, saline purgatives, but without benefit.

When I saw her—autumn, 1850—she was pale, weak, and nervous, suffering from frequent headache, which was increased in intensity in the upright position; her feet were always cold, and she complained of flatulent distension of the stomach and abdomen, and great pain in the rectum, attended with mucous discharge and hemorrhage at stool. Ordered a dose of castor oil to be taken in the morning, and a pint of thin gruel, as an enema two hours afterwards. The bowels acted several times; and when I visited her, the intestine was slightly prolapsed, rendering visible the margin of a florid, granular excrescence of the mucous membrane; by pressing the intestine down, the whole diseased surface was brought into view; it was about five-eighths of an inch in diameter, and of an oval form; the rest of the intestine was healthy. Laxatives and tonics were prescribed to regulate the bowels, and restore her general health; and to restrain

the bleeding, cold water, containing lead, zinc, and other astringents, was injected twice a day; she was also confined to the sofa. The treatment was persevered in for a month, with the effect of improving her health, but not relieving the pain in the bowel, or diminishing in any sensible degree, the hemorrhage. It was, therefore, determined to apply nitric acid to the morbid tissue. The bowels having been thoroughly freed, and the mucous membrane made to descend by the administration of an enema, concentrated nitric acid was applied to the diseased part, which was afterwards smeared with oil and the intestine replaced. An opiate was administered; the patient experienced but slight pain after the operation, and slept well at night. On the third day she had some castor oil; when the bowels acted she felt some smarting, but no hemorrhage occurred. She was directed to inject four ounces of cold water, containing eight grains of sulphate of zinc, night and morning. In rather more than a fortnight all local disease had disappeared; by the use of tonics, attention to the bowels, and taking exercise she regained her health, the leucorrhœa ceased, and the catamenia reappeared at proper intervals.

Internal hæmorrhoids; the patient upwards of eighty years of age; successful treatment by nitric acid; irritability of the bladder; phosphatic urine.

A gentleman, upwards of eighty years of age, applied to me in 1854, complaining of a sense of fulness in the rectum, and a constant desire to defecate: he stated that whenever he visited the closet he lost a small quantity of blood, and that a protrusion of the bowel took place; he experienced no difficulty in returning it, but it often descended when he walked. He had tried several forms of mechanical appliances to retain the bowel in its position, but they failed in the intention, and only occasioned him uneasiness and annoyance. Making an examination, I found two hæmorrhoidal tumors prolapsed: their surfaces were florid and granular, and one tumor was slightly ulcerated; the lower part of the intestinal canal was loaded with scybala; the pouch of the rectum was much dilated, and appeared to have little power of contracting. The prostate gland was indurated and slightly enlarged; his urine was alkaline and thick. I first directed attention to unloading the bowel, which was effected by aperients and enemata; and afterwards restoring tone to it, by the administration of small doses of strychnia, and the use of astringent injections. These objects were accomplished, but the bowel continuing to descend, and my patient being much troubled by the sense of fulness in the rectum, I applied the concentrated nitric acid to the hæmorrhoidal excrescences: the pain it occa-

sioned was so slight that no confinement was necessary. On the third day after the operation, the bowels were moved by medicines, and their action was attended with considerable smarting: each succeeding day this was less, and in ten days all inconvenience from the hæmorrhoidal disease was removed, and he has had no return of it since. On several occasions the irritability of the bladder has tormented him much, the urine at these times depositing a large quantity of phosphate of ammonia, forming a tenacious mass adhering to the bottom of the chamber utensil. This condition was relieved by the administration of small doses of morphia and nitric acid, and washing out the bladder with water slightly acidulated with the same acid. This gentleman continued under my care till his death, in Nov. 1857. By washing-out the bladder more or less frequently as the condition of the urine necessitated, by the use of aperients and tonics as occasion required, he was able to pass the time very comfortably, and to take exercise when the weather permitted.

Internal hæmorrhoids; excessive pain; treated with nitric acid.

Mrs. ——, æt. thirty-three, married; the mother of four children, the youngest three years old, of delicate constitution, has always suffered during her pregnancies from enlargement of the veins, and œdema of the legs; the bowels at those periods were particularly obstinate. She has always been of costive habit, and has had constant recourse to purgatives, chiefly salines; during the period of gestation she has also suffered from external piles. In 1848 she began to experience aching, weight, and fulness in the rectum; hemorrhage occurred at intervals, increasing in quantity as time rolled on. Pain in the bowel became very distressing.

When I was consulted (1850), she had not been able to leave the house for some weeks, and had been confined to the couch, feeling easier in the prone position. She was pale, nervous, and debilitated; the menstrual secretion had been scanty, and occurred at lengthened intervals; she complained of acute pain in the rectum, increased to a violent degree at stool, followed by hemorrhage of an arterial character. Her skin was dry, tongue flabby and furred, pulse small, urine scanty and high colored, appetite bad; it had previously been capricious, sometimes voracious; she had pain at the epigastrium, and flatulence; the abdomen was hard, and dulness on percussion in the course of the colon existed. Examining the rectum, it was found loaded with indurated feces; on the right side, about three-quarters of an inch from the margin of the anus, were two excrescences, each about the size of a fourpenny-piece; their surfaces were florid and granular in appearance, and bled freely on the slightest touch. I

proposed applying the concentrated nitric acid to the morbid tissues; but, it being necessary to unload the bowels and get the constitution into a better state, suitable remedies were prescribed, and the patient ordered to remain in bed.

By the medicines prescribed, the abdomen became soft, and the general health somewhat better; but the pain in the bowel continued, and hemorrhage occurred at each action of the bowels, which the injection of cold water failed to check.

On the seventh day after I first saw her I introduced a speculum ani, and touched the raised and granulated mucous membrane with the strong nitric acid, using a piece of lint on the end of a probe; smarting was experienced at the time, but this soon subsided; an enema of four ounces of starch and thirty minims of liquor opii sedativus having been injected into the bowel. Ten grains of Dover's powder were administered at bedtime. She passed a tranquil night; on the third day the bowels were moved by a dose of castor oil, smarting was experienced at the time; she was directed to inject twice a day four ounces of water and eight grains of sulphate of zinc. In ten days the sloughs had separated, and the ulcerated surfaces nearly healed. The bowels were kept open by castor oil. In a few days more she was quite free from the local malady, but was still pale and weak.

A mild aperient chalybeate was prescribed and continued for several weeks. She went out every day for a walk, or in her carriage if the weather was unfavorable; and her health became better than it had ever been; the menstrual function was performed regularly, and was natural in quantity.

Internal hæmorrhoids preceded by dysentery; great loss of blood; stricture of urethra. Hæmorrhoids treated with nitric acid.

Major J——, a tall, fine man, of a naturally good constitution, but impaired by a long residence in India and active military service; had suffered several times from dysentery; for seven years had had piles, frequently lost considerable quantities of blood, the bleeding at times continuing for half an hour: defecation was always attended with pain and much straining, the pain being aggravated when the feces were bulky and indurated; the bowel slightly descended at stool, but returned by muscular contraction. He had had various remedies prescribed, as lenitive electuary and sulphur, copaiba, Ward's paste, &c., but without benefit. No examination of the bowel had been made by the several surgeons he had consulted. His countenance and conjunctivæ were slightly yellow; tongue covered with a creamy fur; skin dry; appetite moderate; had flatulence, and frequently felt fulness and pain at the epigastrium after eating: urine high colored and voided in a small stream, with some straining; slight

tenderness over the liver on pressure; no enlargement of it indicated by percussion; pulse feeble and irritable. By examination after the action of the bowels, the mucous membrane being prolapsed, a florid granular surface from which blood freely oozed, was observed; it was about the size of a shilling, and slightly raised from the surrounding tissue; it was very painful when touched: the finger introduced into the rectum did not detect any tumor. The treatment adopted was at first small doses of mercury with chalk, and extract of taraxacum; aperients every second morning; subsequently tonics, with nitric acid, and various preparations of iron: enemata of cold water were used; afterwards astringent fluids. Examination of the urethra detected a stricture, through which a No. 3 catheter was passed with some difficulty; the introduction of instruments twice a week was had recourse to, the size being gradually increased, till the natural calibre of the urethra was restored. By perseverance in the remedies, his general health was much improved, the countenance became clear, the pain in the region of the liver subsided; but though feeling much better, the bleeding from the rectum continued. Having given medical treatment a fair trial without much benefit to the local disease, I deemed the application of nitric acid advisable. The bowels having been freely moved by extract of colocynth and blue pill taken at night, and an enema administered the following morning, the florid granular surface of the pile was exposed by a speculum, and freely touched with strong nitric acid, chalk and water being subsequently used to neutralize the excess of acid, and prevent injury to the surrounding tissue. After the operation, a dose of laudanum was administered. On the third day, the bowels were moved by castor oil: for some days subsequently he experienced smarting when at stool, but the pain gradually lessened. He was directed always to use enemata of cold water after defecating. It is now seven years since I attended this patient, and he has not had the slightest return of any of the symptoms from which he previously suffered.

Internal hæmorrhoids; medical treatment not arresting the symptoms; the tumors removed by ligature.

The Rev. ——, æt. forty-seven, of ordinary stature, of studious and sedentary habits; lived more freely than was compatible with the little exercise he was accustomed to take; had long suffered from constipation, flatulence, and giddiness. For several years previous to my seeing him he had been subject to hæmorrhoids, attended with great loss of blood at times. When he consulted me in the spring of 1846, bleeding had occurred daily for three weeks, which had greatly reduced him. On examining

the intestine, three internal piles were discovered, two being much larger than the other. His pulse was quick and weak, his tongue furred, and skin dry. Ordered five grains of gray powder, and six grains of Dover's powder, to be taken at bedtime, and one ounce of castor oil in the morning: an hour after taking the oil a pint of thin gruel was thrown up the bowel. The medicine and enema acted freely, bringing away a large quantity of indurated feces, attended with pain and a considerable loss of blood. The bowels were kept easy by an aperient electuary, and eight ounces of cold water, containing a scruple of acetate of lead and twenty minims of tincture of opium, injected twice a day; the hemorrhage continuing, turpentine and other remedies were tried, but without any beneficial result. I proposed ligature of the tumors, to which he was unwilling to submit. Mr. Liston then saw him in consultation, and agreed upon the necessity of the operation. On the following day, double ligatures were applied to the tumors, in the manner directed in the text, and firmly tied; a dose of castor oil and an enema had been administered, and had acted freely before the operation was performed: thirty minims of the liquor opii sedativus, in camphor mixture, were given immediately afterwards. Pain was experienced during the afternoon of the first day. On the third day after the operation, the bowels were moved by castor oil: the ligatures separated on the fifth and sixth days. The bowels were kept easy by emollient enemata; and half a pint of cold water, containing sixteen grains of sulphate of zinc, was injected twice a day. He was quite well in less than four weeks.

He was enjoined to take exercise every day, and to attend to the condition of the digestive functions. I have not heard of this gentleman since the summer of 1852, but up to that time he had been quite free from any hæmorrhoidal affection.

Internal hæmorrhoids; great loss of blood; removal of the tumors by ligature.

K. M——, æt. thirty-seven, single, a cook in the service of my former colleague, Mr. Hulme, who requested me to see her. She stated she was first attacked with piles ten years ago, and has never been well since: for the last five years she has lost a considerable quantity of blood at intervals. Hemorrhage had been going on for three weeks previously to my seeing her (Feb. 1853): she had not informed Mr. Hulme of her indisposition till she was no longer able to keep about: he ordered her to bed, and directed cold and astringent applications. When I saw her she was perfectly blanched, and hardly able to turn in bed; her pulse was feeble and quick: on making an examination, the anus was observed surrounded by a fold of integument greatly distended,

and having a pale, semi transparent appearance. Three internal hæmorrhoidal tumors existed; they were pendulous, and about an inch in length and three-eighths of an inch in diameter: the mucous membrane was granular, and bled freely on being slightly touched.

Taking into consideration the duration of the disease, the state of the patient, and the condition of the tumors, I deemed removal of them by ligature the most appropriate plan of treatment. Early in the morning she had taken a dose of castor oil, which had acted freely, it was therefore determined to perform the operation at once: an enema of warm water was administered, and on being ejected, the tumor was prolapsed; double ligatures were then passed through each of them, and tied tightly, so as entirely to interrupt all vascular and nervous connection. The ends of the ligatures being cut off, the piles were returned within the sphincter: thirty minims of tincture of opium were given for the purpose of producing temporary constipation and of tranquillizing the system.

On the second day after the operation she had pain in the bowel, and slight difficulty in micturating. Directed to have a hip-bath, to take a dose of castor oil the following morning, and to have an emollient enema injected twice in the twenty-four hours.

The whole of the ligatures had separated by the eighth day, no bleeding had occurred since their application. Slight inflammation of the rectum supervened, which was due to the patient not attending strictly to the directions given her with regard to diet and medicines; it speedily yielded to simple treatment, and she made a favorable recovery. The external fold of œdematous integument collapsed, and the anal orifice resumed its natural size. She has had no pain, hemorrhage, or other symptoms of the disease, and continues perfectly well.

Internal piles; catamenial and hæmorrhoidal flux alternating; tumors removed by ligature.

Mrs. C——, æt. thirty-nine, married twelve years; has had five children; for several years has suffered from internal piles, which first appeared while she was pregnant with her second child; prior to that time she enjoyed good health. She placed herself under my care in 1845; she was then pale, nervous and weak. During the preceding twelve months the hæmorrhoidal affection had troubled her greatly; her bowels were torpid, never. acting without being excited by medicines; she experienced great pain in the bowel, up the sacrum, in the loins, and down the thighs. Sometimes at the catamenial period profuse hemorrhage occurred from the rectum, and superseded the uterine function; on other

occasions the menstrual flow appeared in due course, and then there was little or no bleeding from the piles. In the intermediate time she lost blood whenever the bowels acted, and was much troubled with mucous discharge. Her pulse was quick and weak, her skin, pale, dingy, and clammy; she complained of violent palpitation of the heart from the slightest exertion; her feet were always cold, and swelled much during the after-part of the day. I examined the bowel; the anus was somewhat relaxed, and two large internal hæmorrhoids were partly prolapsed; they were highly congested and very painful. The first object was to improve her health generally; for this purpose she took small doses of gray powder and Dover's powder at bedtime, and castor oil in the morning; also, for a few days, a mixture of citrate of potash and nitrate of potash in camphor julep; afterwards the ammonio-citrate of iron in infusion of calumba; several enemata were exhibited. In ten days her health was improved; the bleeding from the piles, though not so profuse, still continued; she had considerable pain at times, and experienced great annoyance from the mucous discharge and prolapsus of the tumors.

It being determined, after due consideration, to apply a ligature to the hæmorrhoids, a large enema was thrown up the bowel by an elastic tube, and after it had come away a double ligature was passed through the base of each tumor and tied; the ends were then cut off, and the parts returned within the anus. My late and lamented friend, Mr. Morton, attended the case with me, and kindly lent me his assistance on the occasion. Some pain was experienced during the night, and in the morning she felt slight difficulty in passing her water; these symptoms were relieved by a hip-bath, and warm poultices to the anus; a draught of hyoscyamus and nitric æther in camphor mixture was prescribed. On the third day after the operation the bowels were moved by a dose of castor oil, which was repeated every second day for a fortnight. The first ligature separated on the sixth, and the last on the ninth day; six ounces of water, containing twelve grains of sulphate of zinc, were then injected up the bowel night and morning. In three weeks the local affection was quite cured; but as the bowels did not act freely, and she had not thoroughly regained her strength, some aperient and tonic medicines were prescribed.

She continued the remedies for a few weeks, in which time her health was restored, and the catamenia became regular.

Internal hæmorrhoids; existence for several years; operation by ligature.

Mr. S——, æt. forty-three, tall, muscular system of ordinary development; is of very regular habits, and moderate in regard

both to eating and drinking. Being engaged in business, he is not able to take much exercise. He has always been of costive habit, the bowels not generally acting oftener than once in two or three days. For many years he has suffered from the several annoying and distressing symptoms usually attending internal hæmorrhoids. About eight years previous to applying to me, the piles descended at stool; for a time they were retracted after defecation, but for several years he has been obliged to replace them; for two years they have protruded from the anus on his assuming the upright position. The discomfort and annoyance caused by their constant protrusion became so great as seriously to interfere with all the pleasures and enjoyments of life. He had not had advice for several years, but had treated himself, and possessed most of the books that had been published on the subject for a long time past. His countenance was clear; tongue but slightly furred, and notched by the impressions of the teeth; his skin was cool, and the urine free from deposit. The sphincter ani was relaxed; and two hæmorrhoidal tumors, the size of hazel-nuts, dense, and but slightly compressible, were prolapsed. By passing the finger into the rectum they were found to be connected to the upper margin of the internal sphincter. It being evident that removal of the tumors was the only treatment that could relieve him, and the state of the constitution admitting the immediate performance of the operation, it was decided that ligatures should be applied.

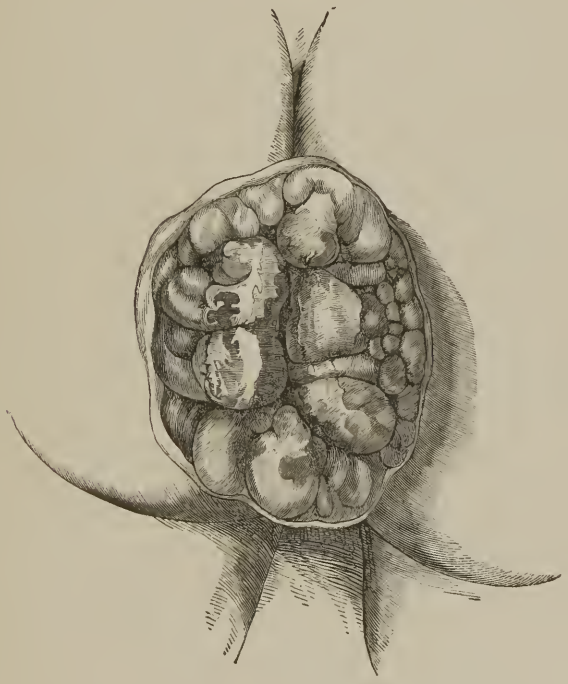
The bowels having been previously very freely relieved by medicines, in the afternoon I passed a double ligature through the base of each tumor. They were seized separately by a pair of forceps, and drawn down by Mr. Henry Thompson, who kindly assisted me, while I transfixed them with a needle. The ligatures having been drawn thoroughly tight, the ends were cut off within half an inch of the piles, which were then returned within the rectum. Half a drachm of tincture of opium in camphor mixture was administered immediately. On the second day after the operation, my patient, feeling no pain, had left his bed-room. His skin was cool, tongue moist, and pulse quiet. A laxative was prescribed to be taken if the bowels did not act the next day. In ten days this gentleman called on me; the ligatures had come away, and the parts had quite healed. I advised him to take an aperient and tonic mixture to get the bowels into a regular state, and to inject half a pint of cold water after defecating. This plan of treatment had the desired effect, and he has not since experienced the slightest inconvenience.

Aggravated cases of internal hæmorrhoids; disease existed twenty years; ten ligatures required; successful operation.

Mr. H——, æt. forty-seven, in business at the west end of London, requested my aid, as he was suffering severely from hæmorrhoids. When I saw him he was in bed, and so weak that he was scarcely able to speak; his countenance, the whole surface of the body, his lips and gums, were perfectly, blanched and he looked more like a corpse than a living being. I learned he had suffered from hæmorrhoidal disease for twenty years, and for many months had lost considerable quantities of blood, not only at stool, but even while in bed: for several years he had been subject to frequent attacks of gout. Examining the local disease, the worst case presented I have ever seen: the sphincter ani had entirely lost all power, and a mass of internal hæmorrhoidal tumors extruded, exceeding in bulk the size of two fists. The tumors were ulcerated, and from their surface there was a copious exudation of discolored serum, for it could not be called blood. Suffering intense pain when the bowels were moved, he had almost abstained from food, with the exception of tea, for several weeks, in order to render defecation less frequent. I returned the tumors, and retained them by a pad of lint and a bandage, and ordered him light, nutritious food, and stimulants at short intervals. The case gave me the greatest anxiety: his vital powers were so low that he could not exist as he was more than one or two weeks, and the shock of an operation on a constitution so reduced might be attended with fatal consequences; but it being certain that if the local disease were not removed he could not survive, I determined to act. Having ascertained that the lungs, liver, kidneys, and other organs were free from disease, and the bowels having on several occasions been relieved by enemata, on the 16th July, 1857, I applied ten ligatures, completely strangulating the whole of the tumors. Dr. Snow administered chloroform, from the effects of which he recovered soon after the operation, and then took a draught containing ammonia and opium, with the effect of tranquillizing the system and procuring a refreshing night's rest. The following morning he was easy, and decidedly better than previous to the operation. I directed that small quantities of arrowroot with brandy, beef-tea, &c., should be administered at short intervals: for several days I watched him very closely and anxiously, and had the satisfaction of witnessing a gradual improvement; his pulse, which from the time I first saw him was tremulous, now became distinct, and much slower; his countenance assumed some degree of animation, and he expressed a confident belief in his recovery. Fearing the effects of purgative

medicines, the bowels were moved by enemata for the first week. By the twelfth day the whole of the ligatures had separated, and the parts were rapidly healing: on the fourteenth day he was able to be removed into the country, previous to which he had commenced to take the ammonio-citrate of iron, and aromatic spirit of ammonia in infusion of calumba: he continued to take this for some time, and had recourse to cold enemata daily, and the occasional use of mild aperients, and I had the gratification to see him completely restored to health, gain flesh, and entirely free from the local disease which had so nearly produced fatal consequences.

The annexed engraving is from a drawing taken by Mr. Tuson at the time of the operation, and conveys a good idea of the



large size of the tumors and their ulcerated condition: the smaller convolutions of mucous membrane were of a livid purple color, and the larger tumors of pale vermilion.

Internal hæmorrhoid; constant descent of tumor; removal by ligature.

Mr. ——, æt. thirty-seven, residing in Porchester Terrace, of ordinary stature and conformation; nervous, anxious disposition, has always experienced difficulty in regulating his bowels, which have been habitually constipated; not accustomed to active exercise. For several years he had lost blood at stool, and at times had severe pain in the rectum, which rendered him incapable of bodily or mental exertion. Two years previously to his coming under my observation, a tumor descended from the bowel when at the closet, and since its first descent, it has always been necessary to replace it by the finger. He mentioned these facts to Dr. Quain, his physician, who desired him to consult me. His pulse was weak; countenance pale; eyes dull; tongue furred; abdomen hard; skin dry; urine cloudy, which, under the microscope, presented numerous octahedral and dumb-bell crystals of oxalate of lime. The sphincter ani was contracted; the mucous membrane of the rectum was observed to be congested. By digital examination, a tumor, the size of a cherry, was detected, attached to the upper and interior margin of the internal sphincter by a fold of mucous membrane; it was firm, and but slightly elastic. From the nature of the tumor it was decided to remove it by ligature. He remained under the care of Dr. Quain for three weeks, during which time his general health was greatly improved. The bowels having been thoroughly freed by the administration of four grains of blue pill, and six grains of compound colocynth pill at bedtime the previous night, and castor oil and an enema in the morning, with the assistance of Mr. H. Thompson I applied a doubled ligature to the tumor, transfixing its base with a needle fixed in a handle. He remained in bed three days, and experienced but little pain. On the fourth morning he took a dose of castor oil: the bowels acted freely, attended with some uneasiness in the part. He was directed to get up, but desired not to stand or sit too much. The following draught was prescribed, to be taken every morning: Compound infusion of gentian, one ounce and a half; sulphate of magnesia, one drachm; carbonate of magnesia, ten grains. One ligature came away on the fifth day, and the other on the ninth: for some days afterwards he had smarting at stool, but it gradually subsided. He took the medicine for three weeks, after which the bowels acted freely each day without it: he had greatly improved in appearance, was quite cheerful, and expressed himself as being better than he had been for many years.

Internal hæmorrhoid, attended with great pain, bleeding, and constant descent of the tumor; ligature applied.

The following case was also sent to me by Dr. Quain:—

Mr. ——, a publican, tall and stout, his eyes dull, and sclerotic conjunctivæ yellow, his tongue large and flabby, covered with a thick fur, and the edges deeply notched by the impressions of the teeth. He informed me that he took little or no exercise, sometimes not leaving the house for upwards of a week: he lives freely, but is not often intoxicated; has always suffered from constipation, and had long been annoyed by dyspeptic symptoms, as well as various uncomfortable sensations in the rectum. Four years previous to applying to me, he discovered that "a lump" descended at stool, attended with bleeding and severe pain; it had always been necessary to replace it with his fingers. Digital examination detected on the right side an indurated pile, attached to the bowel, about two inches above the anus. An enema being administered, a pile the size of a large cherry was extruded. Considering the density of the tumor, its constant descent, and the strong desire of the patient to be relieved of his sufferings, it was decided an operation should be performed. Under the judicious treatment of the physician who referred him to me, in ten days the constitutional defects were remedied. At the expiration of this time, with the assistance of Mr. Hulme, I carried a needle armed with a double ligature, through the base of the tumor, and tied it firmly in two portions. The bowels had been freely relieved previous to the operation; after it had been performed, a dose of opium was administered. For four days there was slight feverish excitement and œdema around the anus. These yielded to salines, low diet, and linseed-meal poultices. On the third morning, he took some castor oil, and repeated it every second morning for a few times. Enemata of flaxseed-tea were daily used. By the eleventh day, the ligatures had come away, and the ulcers resulting had quite healed. The necessity of taking exercise was strongly impressed on him: and he was directed to inject half a pint of cold water after defecating, to use soap and water externally morning and evening, to live moderately, and to keep the bowels regular.

Internal hæmorrhoids; great loss of blood inducing debility and palpitation of the heart; an ulcer at the posterior part of the rectum, with considerable induration of the surrounding tissues.

The Rev. C. C——, æt. fifty-three, residing in the North of Ireland. In 1856 came to London to consult me for an affection of the rectum which commenced ten years previously. At that period he experienced itching and a fulness about the fundament,

and occasionally lost a small quantity of blood; the accession of these symptoms was soon attended with protrusion of tumors from the bowel each time he visited the closet, and he was seldom free from pain in the rectum and sacral region. He gradually grew worse, and for the last four years he daily lost a considerable quantity of blood, and any slight exertion was attended with violent palpitation of the heart, and a feeling of faintness; he also suffered from cramps in the legs, and great irritability of the bladder, inducing a frequent desire to micturate. He had tried various medicines that had been prescribed, and had been for twelve months in Germany, drinking mineral waters, but experienced no benefit.

When I first saw him, his countenance was pale, his lips and gums colorless, and the tongue much furred; the eyes were dull: his pulse was weak and irritable. By straining slightly, an indurated hæmorrhoidal tumor the size of a chestnut was made to protrude: the finger being introduced into the bowel, it was found to be connected with the upper margin of the internal sphincter. At the posterior part of the rectum, an ulcer three-eighths of an inch in diameter was felt: the tissues around were so dense as to raise a suspicion of cancer in the mind of a medical friend who examined him also, but in this opinion I did not coincide. Blue pill and ipecacuanha were directed to be taken at bedtime, and a tonic and aperient draught every morning. After using these remedies for six days, his general health being much improved, with the assistance of Mr. H. Thompson I passed a double ligature through the base of the hæmorrhoidal tumor, and tied it in two portions. I afterwards, with a probe-pointed knife, carried up on the index finger of the left hand, incised the ulcer on each side of the median line. On the third day, the bowels were moved by castor oil; on the sixth day, the ligatures came away: he suffered so little after the operation, that he was now able to leave the house. He was directed to take a draught containing iodide of iron twice a day for three or four weeks, and he very shortly returned to Ireland. Three months afterwards, passing through London on his way to Brussels, he called on me; his countenance was florid, and he informed me he had been perfectly free from all symptoms of his former complaint; that he could walk many miles without fatigue, had been free from palpitation, and had gained a stone and a half in weight. I examined the rectum; all induration had disappeared, and no evidence of former disease remained. I saw this gentleman again in 1860, and he remained quite well.

Hæmorrhoids existing thirty years; failure of two operations, and other treatment; perfectly cured.

Mr. Rogers Harrison requested me to see Mrs. C——, who had long suffered intensely from hæmorrhoidal disease. She married young, and spent the greater part of her life in India. After the birth of her first child, she became afflicted with piles: the earliest symptoms she experienced were loss of blood at the closet, and a sense of aching and fulness in the rectum, followed, in the course of time, by a descent of hæmorrhoidal tumors, which increased rapidly in size, and gave rise to great suffering. During her residence in India, on two occasions she underwent operations, and each time experienced great agony, without deriving any benefit, as only portions of the tumors were removed. For some years her bowels were constipated, but latterly she had kept them free by medicine and injections. On my visit she was in bed, and on making an examination I found several large hæmorrhoidal tumors protruded, being in the aggregate equal in size to a man's fist. The apices of the tumors, from the long existence of the disease, had become much altered in structure, being dense and semicartilaginous. Mrs. C—— stated that on the tumors being prolapsed it took her the greater part of the day to replace them, and till then she was obliged to remain in bed. I informed her that nothing but an operation could relieve her, that properly performed she could be entirely freed from the disease with which she was so sorely afflicted, with perfect safety, and without experiencing any considerable amount of pain. She was very incredulous as to my statement, in consequence of her previous experience and disappointment in the results. But she gave her consent that I should do whatever I thought proper, as in her present state her life was a burthen to her.

A few days subsequent to my first interview with Mrs. C——, the bowels having been thoroughly relieved previously, with the assistance of Mr. Harrison and Mr. Clover, I performed the necessary operation, first freely dividing the mucous membrane from the anal integument, and then passing six ligatures well beneath the base of the larger tumors, which were tied in the manner I advise. Three smaller tumors, that occupied the anterior portion of the bowel, and which were also indurated, and but slightly vascular, I excised, there being no fear of hemorrhage. A large artery coursed down the bowel on the left side, entering one of the more important tumors. I carefully avoided wounding this vessel with the needle carrying the ligatures. After the operation an opiate was administered, and she passed a very tolerable night. The third day the bowels were relieved by an aperient, and she experienced some smarting at the time; subsequently a

mild stimulating ointment was applied daily, and aperient medicine administered when required, and in a short time she was perfectly cured of a disease that commenced thirty years previously, and had rendered her perfectly miserable during the greater part of that time. In a letter I received from this lady about two years after the operation, she says, "I cannot allow this opportunity to pass by without expressing the deep and heartfelt debt of gratitude I owe you for the incalculable benefit derived from your superior skill and judgment, combined with your unremitting kindness and attention in effecting a thorough and radical cure of a disease which rendered my existence miserable and undesirable, extending over a period of five-and-twenty years, baffling the repeated efforts of several eminent practitioners of various climates, unavailingly employed during the long and painful period of my life just mentioned, but now made happy and useful both to my family and self."

CHAPTER X.

ENLARGEMENT OF THE HÆMORRHOIDAL VEINS.

The hæmorrhoidal veins are liable to dilatation quite distinct from, and not to be confounded with, the morbid condition of the several tissues constituting piles. They assume precisely an analogous condition to the veins of the testicle forming varicocele, and to the branches of the saphena vein constituting the troublesome affection generally known as varicose veins of the leg.

There are certain physiological causes that predispose to the enlargement of the hæmorrhoidal veins, and others that are pathological. It will be remembered that the portal system, which commences in the veins of the rectum, is destitute of valves, consequently the radical branches are subject to the pressure of the entire column of the blood. Impediments to the venous circulation are very liable to occur from congestion of the liver, from pressure on the venous trunks by overloaded and distended intestine, by the pregnant womb, by ovarian and other abnormal abdominal tumors.

Generally there appears to exist a predisposition to venous dilatation in those who have the hæmorrhoidal veins enlarged, it being not unusual to observe it associated with varicocele and a varicose condition of the branches of the saphena veins.

The symptoms are a sensation of weight and distension about the rectum, uneasiness in the loins, a feeling of sinking and general lassitude, and the same mental depression which is observed to attend dilatation of the veins of the leg and testicle. The dilated veins may be felt on either side of the rectum like a bundle of earthworms, the same as in varicocele. They sometimes form tumors, projecting internally or externally to the sphincter, but their appearance is very different from those caused by hæmorrhoids.

Since the publication of the first edition of this work, I had

an opportunity of examining a very aggravated case of this disease occurring in a female, a patient at the Blenheim Dispensary. The veins formed large tumors around the anus, and as far as the finger could reach were felt extending up the rectum; the veins of both labia were also greatly dilated, and conveyed to the touch the feeling that has been described. In other cases which have come under my notice, the veins have not formed tumors external to the sphincter ani muscle, but could be distinctly felt within its margin, and were attended by the symptoms above mentioned.

Surgery will be of no avail, either in the cure or in the relief of this affection; but by judicious medical treatment the symptoms and distress arising therefrom may be much mitigated. It is most essential that attention be paid to the proper performance of the chylopoietic organs, that constipation be not permitted to exist, and that the skin and kidneys should duly perform their functions. Moderate exercise will be beneficial, as the venous circulation is thereby facilitated: the patient should avoid standing for any long period, as the erect posture favors gravitation of the blood. The subjects of venous dilatation being generally of lax fibre, they will be much benefited by the use of tonics, more especially the mineral acids. Six or eight ounces of cold water may be injected into the rectum twice or thrice a day with advantage: the cold bath, and ablution in cold water night and morning, will afford great relief, as also will a jet of cold water directed against the anus.

CHAPTER XI.

PROLAPSUS OF THE RECTUM.

Prolapsus, and procidentia ani, are terms familiarly known as signifying a descent of a portion of the terminal part of the intestinal tube external to the sphincter ani; but the inaptness of the expressions is very evident from the fact that the anus is merely the aperture which terminates the alimentary canal, and therefore cannot itself be protruded. Prolapsus recti conveys a correct idea of the character of the lesion, and is now generally adopted.

This affection occurs under two very different conditions, and which require due discrimination, for if they are not fully recognized, the success of the plan of treatment adopted will, at the least, be very problematical. In the one case the disease depends on some morbid alteration in the bowel itself, induced by various constitutional and local causes; in the other it arises from relaxation and loss of tone in the muscles intended to close and support the intestine, which may depend either on functional derangement or organic lesion.

In the adult, it is the descent of the mucous membrane and submucous areolar tissue alone, that constitutes the majority of the cases that come under our observation; and this is what we are necessarily led to expect by taking into consideration the firmer attachment of the muscular coat to the surrounding parts, and which, from its function, also is less liable to protrusion than the mucous membrane, this tissue being both more voluminous and but loosely connected. But instances of the descent of the muscular and other tunics are by no means so rare as is generally supposed; in children it constitutes the ordinary form, few cases occurring in early life in which the muscular coat does not descend. By many excellent surgeons it is maintained that the muscular coat of the intestine is seldom or never extruded. Mr.

Copeland[1] upheld this doctrine. He says: "In almost every case of prolapsus ani, it is the internal membrane only of the intestine which descends through the sphincter muscle. The connection of the external surface of the rectum is so firm with the surrounding parts, that it is almost impossible the whole should be protruded together." However, attentive observation of the affection as it occurs in the living, as well as the evidence afforded by pathological preparations in King's College and other museums, incontestably demonstrate the erroneousness of this impression.

Children are more subject to protrusion of the bowel than adults, occasioned by anatomical difference: thus in the former the sacrum is less curved, the coccyx is not ossified, and remains movable on the sacrum; the intestine itself is straighter, and its connections are less extensive from the imperfect development of the other pelvic organs. Children are also more liable to prolapsus from intestinal irritability, which in them is frequent, being readily induced by slight causes.

The causes of prolapsus are constitutional, and depend upon some peculiarity of the general health or of the habits or occupation of the individual; or they are local, either from disease or irritation existing in the rectum, or as an effect of functional disorder or organic disease in the contiguous pelvic viscera.

Of this affection, as well as of several others to which the rectum is liable, costiveness is one of the most general causes. When the bowels are not relieved every day, the feces accumulate and become hard; the fluid portions being taken up by the absorbent vessels, the bowel becomes distended, local and general irritation is induced, and violent expulsatory efforts are necessary to dislodge the indurated mass; which, pressing on the bowel in descending, may not only drag down the mucous membrane, but cause also the protrusion of the other tissues of the rectum; thus producing a condition, which if occurring higher up the alimentary canal would there constitute an intussusception.

Chronic diarrhœa and dysentery are likewise causes of this disease; they are accompanied by straining, irritation, and determination of blood to the lower part of the intestinal canal; and

[1] "Observations on the Principal Diseases of the Rectum and Anus," by Thomas Copeland, Third Edition, 1824, p. 73.

inflammatory action and various morbid alterations of structure induced.

Disease of the liver is not unfrequently associated as a cause, with prolapsus of the rectum; those who have resided in hot and miasmatous countries, and have suffered from hepatic affections, are very liable to experience the miseries of prolapsus, and we thus find it prevailing greatly in individuals returned from India, and other tropical countries.

The annexed engraving, which well illustrates the distinctive characters of prolapsus recti, and the difference between it and in-

ternal hæmorrhoids, is from a drawing of a case I was requested to see by Mr. W. Bennett; the patient had malignant disease of the liver, consequently only palliative treatment could be adopted for the local disease.

Prolapsus may result from indigestion; the primary seat of the evil being in the stomach or duodenum, or some defects in the functions of the pancreas and liver, whereby the fecal matter is rendered irritating and diarrhœa induced. Deranged function

of the organs just mentioned will at times induce a contrary effect to diarrhœa, the colon and rectum being insufficiently stimulated by the excretory matter, fecal accumulations are consequently promoted.

Sedentary occupations act rather as a predisposing than as a direct cause of prolapsus. By insufficiency of exercise a torpid state of the alimentary canal is induced, the biliary secretion becomes diminished, and the skin does not properly perform its excretory functions.

Prolapsus may be attendant upon the violent straining and forcible muscular efforts during difficult parturition, or from the relaxation occurring by frequent child-bearing. It may also be produced by violent and immoderate horse exercise.

Constitutional weakness, hereditary or induced, is another cause. The children of the poor are the subjects of prolapsus, from being badly nourished, and living in close and unhealthy habitations, or by being suckled too long. In a public infirmary, some time since, I had an infant under my care, which illustrated in a marked degree the effect of neglect and deficiency of proper nourishment; several inches of the bowel were prolapsed; it was with great difficulty it could be reduced, and it was still more difficult to prevent its descent; but no treatment could be of any avail, the debility being so great and the assimilative functions so impaired, that death very shortly put an end to the little patient's sufferings.

Prolapsus of the rectum in the adult has its origin in various local causes: the existence of some other rectal diseases may produce it, such as hæmorrhoids or polypi, which in their descent also bring down a portion of the healthy bowel; it occurs in close stricture of the intestine consequent on the straining and violent expulsatory efforts attending that disease. Enlargement of the prostate gland is another common local cause in the male subject. I have several times observed it as an effect of stone in the bladder, and frequently as the result of violent straining accompanying bad cases of urethral stricture. Inflammation of the bladder in either sex, and various diseases of the womb and vagina, will likewise produce it. Prolapsus may depend on relaxation of the sphincter ani, arising simply from muscular debility, or as an effect of some perversion of nervous function or

lesion of the spinal cord. Debility of the intestine itself from over-distension produced by excessive fecal accumulations, or the habitual use of large enemata, also the extraction of large foreign bodies from the rectum. In children, the most frequent causes are urinary calculi, intestinal irritation produced by acrid secretions, or the presence of entozoa, and the irritation that often exists during the period of dentition.

The symptoms produced by prolapsus recti are various, according to the duration of the disease, and the extent to which the bowel is protruded. The tumor in children is red, pyramidal, and coiled in form; in adults it is either globular, cylindrical, or appears as lateral folds on each side of the anus. The amount of intestine protruded varies from a mere fold of the mucous membrane to several inches of the whole of the tissues. In the case of a child with stone in the bladder, which was successfully removed, the intestine was prolapsed to the extent of six inches. At the commencement of the affection, the intestine is retracted spontaneously after the passage of the motion, but ultimately it becomes necessary to replace it with the hand. Sometimes the protrusion increases very rapidly, especially in children; but if the patient is an adult, and not advanced in life, or laboring under constitutional debility or weakness of the muscular apparatus of the anus, it takes place more gradually. A copious secretion of red glairy mucus is poured out from the lining membrane of the rectum, great weight in the bowel is experienced, and a constant sensation of a desire to defecate exists; pain is felt in the hips, down the thighs, and even extending to the legs and feet, and may be attributed to rheumatism or sciatica.

After prolapsus has existed some time, the mucous membrane becomes indurated, and loses its villous appearance. When the sphincter is relaxed, and the anus dilated from the repeated protrusion of the bowel, the latter descends on the slightest exertion: even assuming the upright position is sometimes sufficient to cause it to fall down; it is then very liable to become ulcerated from the friction to which it is exposed: in these cases the pain and distress are almost insupportable; defecation produces acute agony, and the patient is compelled to lie down for an hour or two afterwards.

In the treatment, we have to consider the removal of the cause,

the replacement of the protruded intestine, and the retention of it in its natural position: if we fail in the latter, it will then be necessary to have recourse to operative surgery.

Our first efforts must be directed to the replacement of the protruded bowel: provided the prolapsed portion is free from engorgement, this may be effected at once, but if, on the contrary, inflammation and vascular turgescence exist, it may be necessary to apply leeches to the surrounding parts, and subsequently to use hot fomentations of decoction of poppyheads. Some have recommended scarifications and leeches to the bowel itself, but I have witnessed much evil and never any good from the proceeding. If the engorgement is not sufficient to require the abstraction of blood, the application of cold lotions will prove beneficial. In order to replace the intestine, the patient must be placed on his side in the recumbent position, or be directed to kneel on the bed and rest on his elbows: the buttocks being separated by an assistant, the surgeon grasps the tumor in a piece of oiled linen, makes firm compression, and, having reduced its volume, pushes it within the sphincter. During this proceeding the patient must be desired not to strain, otherwise our endeavors will be opposed. Should contraction of the sphincter prevent the return of bowel, the patient may be put under the influence of chloroform, when the obstacle to the replacement will probably be removed; but muscular relaxation is not the constant effect of this anæsthetic agent, the converse being sometimes the case, and spasmodic contraction induced. Should the constriction of the sphincter persist, the muscle must be divided by inserting under its margin the nail of the forefinger on which the knife used in operating in fissure is to be carefully guided, and the necessary incision made. In children, especially if the prolapsus be large, great difficulty will be experienced in returning it: to facilitate the operation, some recommend the introductiou of the finger into the bowel, which is to be carried up with it; while the finger is being withdrawn, the intestine is to be supported with the other hand. Sir Charles Bell recommends the finger being covered with oiled paper, which will allow its withdrawal without bringing down the bowel.

Having returned the prolapsus, a pad of lint must be applied, and retained with a T bandage. The attention must then be

turned to the constitutional treatment, and to the removal of the cause. The digestive organs should be attended to, and any errors of diet corrected: the aliment allowed must be easy of digestion, nutritious, and such as will not cause bulky evacuations; highly-seasoned dishes and large quantities of vegetables and fruit are to be prohibited; the tone of the stomach, if impaired, is to be restored by bitter infusions and aromatics, with the addition of soda, potash, or ammonia: in some cases, the mineral acids may be substituted with advantage for the alkalies.

Too great attention cannot be paid to prevent costiveness, which so generally accompanies this disease either as a cause or effect; but we must avoid having recourse to drastic purgatives. Emollient enemata, castor oil, lenitive electuary, Rochelle salts, and other similar remedies, will be the most desirable. It is very essential not to overlook the state of the liver: congestion of this organ will often be indicated by the lividity of the prolapsed bowel: alterative doses of mercury with ipecacuanha, taraxacum, and nitric acid, will be serviceable in hepatic derangement. After every evacuation the anus should be washed with soap and cold water, and from two to four ounces of an astringent injection thrown up the rectum: the decoction of oak-bark with alum, or a solution of tannic acid, are better than solutions of the mineral salts.

In children the treatment of prolapsus of the rectum is very troublesome and often tedious: the nurse must be directed not to allow the child to sit straining on its chair, as is too commonly the practice, and she should be instructed to replace the gut immediately after the motion is passed, previously washing it with a little alum and water, or a solution of tannic acid. The bowels must be kept easy; for which purpose various means must be had recourse to, according to the condition and constitution of the child. Small doses of castor oil will often have the desired effect: if much mucus exists in the intestines, one or two doses of calomel and jalap will be very advisable: should there be evidence of abdominal congestion, various combinations of rhubarb, calomel, or gray powder, and James's powder, must be had recourse to, the quantity and frequency of the dose being regulated by circumstances. Great care must be taken with regard to the child's diet; it must not be permitted to eat a great quantity of

vegetable substance, which tends to load the bowel, while it affords but little nourishment. Sir Benjamin Brodie[1] advises injecting into the rectum every morning two or three ounces or more of a lotion containing a drachm of tinct. ferri muriatis to a pint of water. But children cannot retain astringents sufficiently long to be beneficial, therefore the plan I have just recommended is preferable.

When prolapsus is the result of the irritation and violent straining induced by stone in the bladder, the calculus must be removed; and the means by which this is to be accomplished, whether by lithotomy or by lithotrity, must depend on the age and constitution of the patient, the size and character of the stone, and the condition of the bladder and kidneys. The bladder being freed from the presence of the foreign body, and consequently the irritation being no longer excited, its effect on the bowel will probably subside without any special treatment. Should the descent of the bowel arise from the presence of ascarides, these must be dislodged by injections of quassia or oil, and such constitutional treatment adopted as the condition and health of the patient necessitate.

Prolapsus recti, in the adult, if of long standing, will rarely admit of being remedied by medical treatment, and it becomes necessary that some operative procedure should be had recourse to for the relief of the patient. The importance of recognizing the two distinct conditions under which the protrusion of the bowel takes place, and making a correct diagnosis in respect to the individual case, cannot be over-estimated, for an operation that is applicable in the one instance, and would entirely free the patient from the misery he endured, would in the other be followed by a serious aggravation. When the protrusion arises from a voluminous and lax condition of the bowel itself, the object to be effected is reducing its calibre as nearly as possible to its natural capacity, and producing such an amount of adhesion to the deeper structures as is found to exist in the healthy bowel. Of the various operations that have been suggested to fulfil this intention, none are so simple, attended with so little pain, and so

[1] "Medical Gazette," vol. xv. pp. 845, 846.

effectual as that proposed by the late Mr. Copeland.[1] The patient previously prepared by the bowels having been thoroughly unloaded by mild purgatives and enemata, is directed to lean over the back of a chair, or to rest on a bed with his legs drawn up; according to the extent of the disease, one, two, or more longitudinal folds of the mucous membrane are to be pinched up with the forceps, figured at page 112, or with a pair of common dressing forceps, and included in a firm, round, and smooth ligature; the knots must be drawn tight, that perfect strangulation may be effected. In order that the ligatures may not slip, and that they may come away sooner, I prefer transfixing the base of each fold with a needle carrying a double ligature, and tying it in two portions; the pain is by no means increased, and the cure is expedited, as the threads have a smaller amount of tissue to cut through. After the operation, the prolapsus and the ligatures, the ends of the latter having been cut off, are to be returned within the sphincter. The patient must be confined to bed, and a dose of opium or morphia administered. On the second or third day the bowels should be moved by an enema of flaxseed tea, or thin gruel and oil, and this must be repeated every day, or every second day, as may be necessary. For some days the bowel may descend more or less; but as the ulcers caused by the ligatures cicatrize, this will diminish, and a perfect cure will be effected.

Since the publication of the first edition of this work, at the suggestion of Sir Benjamin Brodie, I have applied, in the less severe forms of prolapsus, the concentrated nitric acid to the mucous membrane with the happiest result, and think it is the better plan of treatment in such cases; but to those in which the mucous membrane is very lax and voluminous, it is not applicable, and serious evil would surely follow its use.

In similar cases to the preceding arising from the same cause, and also in those depending on muscular relaxation, I have succeeded in relieving them without having recourse to any operative procedure; this I have accomplished by the aid of the cold douche night and morning, or whenever the bowel descends, while at the

[1] "Observations on the Principal Diseases of the Rectum and Anus," Third Edition, 1824, pp. 79 to 83.

same time employing such medical and constitutional treatment as the general health of the patient indicated. In the *Lancet* (Dec. 13, 1862), I have described an apparatus for the forcible ejection of a jet of water against the relaxed parts. I have since suggested the reservoir being made of strong Macintosh cloth, by which the apparatus is rendered very portable, and in this respect is a great improvement. This apparatus also forms a most efficient uterine douche; and I have employed it in several cases of uterine affections, with great benefit. A continuous stream of water or medicated fluid can be used without the slightest exertion on the part of the patient, and its force may be regulated to any degree.

If the protrusion is the result of relaxation of the sphincter ani and other tissues, not depending on nervous lesion, it is evident any operation performed on the bowel could not be beneficial, but, on the contrary, would be highly improper and prejudicial; here the end to be attained is the restoration to the tissues closing and supporting the terminal portion of the intestinal canal the function they have lost. This is to be accomplished by excising a fold of the lax integument, mucous membrane, and superficial muscular fibres from both sides of the anal margin; scissors are generally used for the purpose, but I prefer a small probe-pointed curved bistoury and a particular kind of forceps adapted for the purpose, whereby the operation is more efficiently performed, and, what also is of consequence, with little pain to the patient. Judgment is required with respect to the extent of the fold that is removed: enough must be taken away so as effectually to cure the malady; but the surgeon must be careful that whilst seeking to remove one source of annoyance he does not produce another which will give much more trouble than the primary affection, namely, contraction of the anus, which will certainly take place if the integument is cut away too freely. The position of the patient during the operation should be that previously described, or, if preferred, that for lithotomy.

If the loss of tone and power in the muscular apparatus of the anus depends on disease of the spinal cord or other nervous lesion, the propriety of any operation will require special consideration.

When prolaspus recti is caused by piles or polypi, their remo-

val by proper means, and the subsequent use of astringents with attention to the prevention of constipation, will cure the protrusion of the bowel.

In some cases, on account of age, debility, or other circumstances, an operation cannot be performed: an endeavor must then be made to support the intestine by pads and a T bandage, or by a truss similar to that recommended by Gooch.[1] The best instruments of the kind that I have seen, are those made by Mr. Egg and Mr. Eagland. The following cases illustrate this affection:—

Prolapsus, caused by disease of the liver and dysentery, induced by a long residence in India.

Mr. A——, thirty-nine, had been nearly twenty years in India; the latter part of the time his health had failed, and his liver became affected; he had also had several dysenteric attacks. Shortly before leaving for England the rectum began to descend, and during the voyage occasioned him much suffering and inconvenience: mercury was administered freely by the surgeon of the ship, but with no benefit to his health. He consulted me after he had been in England two years: he was sallow and somewhat emaciated; his pulse was weak, quick, and irregular; he had frequent palpitation of the heart, and he was much troubled with flatulence: the bowels were irregular, and when they acted he suffered great pain, which continued some hours afterwards: he also complained of being annoyed by a discharge of mucus, and bleeding from the part. The several regions of the body were carefully examined: no organic disease of the heart could be discovered; the liver could be felt extending an inch below the margin of the ribs, and pressure over it produced a dull pain. A fold of the bowel on each side of the anus was protruded, and could not be kept up except when he was in the horizontal position; the surfaces were slightly ulcerated, and somewhat altered from their natural appearance. The urine was examined on several occasions, and was observed either loaded with crystals of uric acid, or with those of oxalate of lime. This patient was seen also by the late Mr. Morton, of University College Hospital, who concurred in the plan of treatment adopted, which was mild purgatives, gray powder with extract of taraxacum, and tonics with the nitro-hydrochloric acid, and the use externally of ablutions and astringent lotions. When his health

[1] "Cases and Practical Remarks on Surgery," by Benjamin Gooch, Norwich, 1767, vol. ii. p. 158.

had improved, ligatures were applied to both sides of the prolapsed bowel, and portions of the mucous membrane completely strangulated; the prolapsus was then returned, and a dose of opium administered. The operation produced a slight amount of pain, but it subsided in an hour or two; he slept soundly during the night. On the morning of the third day he took a dose of castor oil, which moved the bowels several times, and caused a return of the prolapsus; the ligatures came away on the fifth day, after which the bowel protruded but very little, and before cicatrization was complete, it had ceased to come down at all. During the time he was under treatment, his diet consisted of broths, arrowroot, and light puddings. When the ulcers produced by the ligatures were nearly healed, he used enemata of cold water night and morning, and in less than a month he had quite recovered.

Prolapsus, preceded by morbid irritability of the stomach and bowels; cured by operation.

A gentleman, æt. fifty-three, stout, and of relaxed muscular fibre, had for many years suffered from morbid irritability of the stomach, being much troubled with flatulence and frequent vomiting of a watery fluid; his bowels were generally constipated, and defecation was attended with violent straining; at times he had attacks of diarrhœa. He had no appetite for plain food, but partook freely of highly-seasoned dishes. At length protrusion of the bowel at stool was superadded to his other ailments: for a time it was retracted after the evacuations had passed, but ultimately it became necessary to replace it with the hand. He experienced much pain and misery from the disease, and his linen was constantly soiled with mucus and feces. Being very nervous and timid, and thinking some operative proceeding would be necessary, he endured the disease without making it known to his medical attendants; he had tried a variety of remedies without any decided benefit. When he came under my care I prescribed laxatives, tonics, and astringent lotions, with the effect of improving his health; however, the bowel continuing to be prolapsed, he consented to the operation I proposed, and accordingly a fold of the protruded membrane on each side was included in ligatures, which were tied as tightly as possible; the parts were then returned within the anus, and an opiate administered. For the first two or three days he complained of pain; this was mitigated by the use of morphine and the application of hot poultices to the anus. The ligatures separated in less than a week; at this time the operation did not appear to have been successful, as the bowel still came down at stool; but as cicatrization progressed it protruded less, and shortly did not descend at all. The disordered

condition of the stomach was relieved by tonics and the mineral acids, and the administration of the oxide of silver in combination with a mild aperient pill every night for some weeks.

Prolapsus relieved without operation.

W. C——, æt. sixty-seven, of feeble constitution, had been for many years subject to falling down of the bowel, which he attributed to straining violently at stool, being of a constipated habit; he had long been necessiated to replace the bowel with his hand after defecation. I first saw him, in conjunction with my friend, Mr. Bennett, in consequence of his not being able to return the prolapsus, and its becoming excessively painful and occasioning great constitutional disturbance. The prolapsed intestine formed a tumor the size of a large orange; its surface was inflamed and very painful; some difficulty was at first experienced in returning the extruded bowel, but by firm and constant pressure it was at length accomplished; he was confined to his bed, hot fomentations used, and medicines prescribed to allay the constitutional symptoms. On the following morning a dose of castor oil was prescribed; and when it acted, the bowel again descended, but was reduced with less difficulty than on the previous occasion. The state of his constitution rendered an operation unadvisable; but, by attending to keep the bowels open by gentle laxatives, and after their action using soap and water to the protruded part, by replacing it immediately, and retaining it by mechanical means, he was restored to a state of comparative comfort.

Prolapsus of the rectum, leucorrhœa, and irritability of the bladder.

Mrs. ——, æt. forty-three, of very delicate constitution, the mother of one child, but has had many miscarriages; from the state of her health, she has taken very little exercise, and has always had great difficulty in keeping the bowels open. In the spring of 1849 she began to be troubled by a protrusion of the bowel when she strained at stool, which gradually increased: under medical advice she went to Brighton in the autumn, and tried sea-bathing, but with little benefit. The disease increased, and at last the bowel fell down even when she walked; profuse leucorrhœal discharge and irritability of the bladder were also induced. I first saw her in 1851: a circular fold of the bowel, between one and two inches in length, was prolapsed: after being returned it fell down again immediately on her walking about. Palliative means were tried for some time, but with no decided beneficial result further than improving the general health. It being evident that nothing but an operation would keep the intestine in its proper place, and the bowels having been thoroughly

acted on, ligatures were applied on each side of the protrusion, in the manner described in the text: she progressed very favorably, the ligatures separated in the usual time, and she was no longer troubled by the descent of the bowel: by the use of alum-baths the leucorrhœal discharge ceased, and by taking tonics and laxatives she was restored to a better state of health than she had had for many years.

Prolapsus recti from relaxation of the sphincter muscles.

Mrs. S—— consulted me three years since for a falling down of the bowel, the pain and discomfort from which had rendered her life truly miserable. Her constitution was naturally delicate, combined with a laxity of tone in the muscular fibre. She was the mother of several children; her pregnancies followed rapidly, and her confinements were always tedious and severe. Her youngest child was eighteen months old when she consulted me, and from the time of its birth she began to be troubled with a descent of the bowel: at first it took place only at stool, but very shortly it occurred on the slightest exertion, and ultimately it descended even on her assuming the upright position. I made an examination, and found the bowel protruding an inch below the anal orifice: there was no congestion or other deviation from a healthy condition. On replacing the prolapsus the sphincters remained relaxed, and the marginal integument and mucous membrane were in folds. Tonics and aperients were prescribed with the effect of greatly improving her general health; topical applications were also used, but without any result in restoring tone to the sphincters. It being manifest that an operation was the only means by which to maintain the bowel in its proper position, with the kind assistance of Mr. Knaggs, I removed a portion of the tissues from each side of the margins of the anus; the wounds healed favorably in a short time, and my patient was cured of the affection which had caused her so much suffering. By occasionally having recourse to an aperient, and by the use of enemata of cold water, this lady continues perfectly well.

CHAPTER XII.

ABSCESS NEAR THE RECTUM.

Abscess or abscesses forming in the vicinity of the rectum demand especial attention, and more prompt treatment than when occurring in most external parts of the body, in consequence of the evils immediately depending upon them, and the sequelæ arising from implication of the bowel.

Purulent formations in the neighborhood of the rectum are not of unfrequent occurrence, from the nature of the tissue surrounding the terminal portion of the intestinal canal, which is especially prone to suppurative action; and in this locality the predisposition is increased by the looseness of the tissue itself, by its being unsupported by surrounding parts, by the numerous bloodvessels that exist there, and their liability to congestion from position and other causes.

Abscesses near the rectum occur under various circumstances; they may be idiopathic, and either acute, subacute, or gangrenous; they occur after fevers and diseases of a debilitating character, and in these cases appear critical; they may be produced by cold and damp, as sitting on stone benches, on the wet ground, or a wet seat while driving; they also arise from various causes in connection with diseases of the rectum, as in stricture of that part; with the existence of internal and external piles; with ulceration of the lacunæ and perforation of the coats of the intestine, the result of inflammatory action arising from the entanglement of the feces in the follicles, or other causes mentioned in the Chapter on Inflammation of the Rectum. Constipation and accumulation of fecal matter in the rectum and colon will induce the formation of abscess by causing congestion of the vessels, which is increased during defecation by the violent straining to expel the hardened excrement. Foreign bodies penetrating through the tissues of the intestine and sphincter muscle into the cellular

membrane, such as fragments of bones and other substances that have been swallowed; injuries from without, as blows or wounds, lead also to suppurative action.

Abscesses sometimes appear near the rectum connected with disease in other parts, as with caries of the spine, ilium, or sacrum, with disease of the hip-joint, and with affections of the uterus, prostate gland, &c. They are also met with in patients laboring under various organic diseases, either of the liver, heart, or lungs; phthisical patients are often sufferers from abscesses near the rectum, which generally lead to the formation of fistula in ano.

The acute idiopathic abscess is generally preceded by thirst, dryness, and heat of skin, scanty and high-colored urine, and, in fact, by the usual symptoms of pyrexia. In the part itself there will be heat, pain, throbbing, tumefaction, and more or less redness of the integument. These symptoms continue for a few days, when at length pus is formed, rigors frequently marking its advent. When suppuration has been fairly and fully accomplished, the feverish symptoms subside, and the patient generally becomes cool and comparatively easy. Although the swelling may now be considerable, and the part exquisitely painful to the touch, the acute throbbing previously experienced diminishes, and is superseded by a dull heavy sensation. If no surgical means be adopted to evacuate the matter, nature will form an opening for its discharge either externally through the integument, or internally through the intestine.

The subacute abscesses generally form far from the surface, and frequently contain a considerable quantity of ill-conditioned pus; at first they do not occasion much pain or inconvenience; a sensation of bearing down of the rectum is experienced by the matter pressing upon it, but as it increases in quantity it gives rise to severe and distressing symptoms; there will be violent spasm attended with great pain; there will also be a constant desire to go to stool, although the bowels are free from fecal accumulation. In other cases there will be no local symptoms of the existing mischief, and the constitutional ones may be obscure and perplexing. Sir Benjamin Brodie[1] mentions the case of a gentleman he attended, in whom an abscess formed by the

[1] "Medical Gazette," vol. xvi. p. 26.

side of the rectum, and was not conscious of any local symptoms. He had been for some time subject to headache and languor, and was obliged to go home and lie down during the day. The first notion he had of the existence of the purulent collection was its bursting one day while he was walking.

As mentioned, the pus in these abscesses is not of a healthy character; it is, for the most part, of a dark color, and frequently excessively fetid; the latter circumstance may be owing to its contamination with feces entering by a small aperture in the intestine, though I suspect it more frequently depends on the transudation of gases or fluids; indeed, the stench is often much more fetid and offensive than any unlimited quantity of feculent matter. In a case I operated on in 1853, the fetor was intolerable, and a free use of the chloride of lime was necessary in the ward of the infirmary where the patient was; and I remember a similar case some years since at University College Hospital; in neither could any connection with the bowel be detected, and they both healed without forming fistula, or requiring anything more than keeping the incision from closing till the cavity had filled from the bottom.

Gangrenous abscess usually occurs in those whose constitutions have been impaired by luxurious living, or by debauchery and excesses. The symptoms commence with rigors, attended with fever: the pulse at first is full and hard, the tongue is coated, the skin dry and hot, there is great thirst, loss of appetite, and general restlessness; but the character of the symptoms soon changes, the fever becomes of the adynamic type, the pulse is then weak, quick, and irregular, the countenance flushed, the tongue becomes brown and dry in the centre, and the edges red and glazy, and, in the worst forms, the lips and teeth are covered with sordes. The secretions and excretions are disordered, extreme debility and prostration are present, accompanied with more or less stupor. With the early constitutional symptoms a deep-seated pain near the rectum is complained of, which increases and becomes of a burning character; if the part be examined, hardness will be found, which rapidly extends, and the integument assumes a livid color. Tenesmus and dysuria are more likely to be present and severer in this than in other forms of abscess which we meet with near the neck of the bladder, except those occurring between the prostate and rectum.

Traumatic abscesses occur from violence from without, as from gunshot wounds, punctures, and contusions; and from within by the entanglement by the sphincter of various foreign bodies which either pierce the intestine or produce perforating ulceration. Abscess from the first cause is seldom seen except in the practice of military surgery.

M. Ribes[1] mentions the case of an officer who received a musket-ball in the right buttock, which passed into the rectum, fracturing the tuber ischii in its course; the external wound healed in about six weeks, when an abscess formed in the right side of the perineum: this was opened, and a fragment of bone and some pieces of cloth were extracted. Bushe[2] had a soldier under his care who was wounded in India, the ball passing into the rectum; the opening into the intestine healed, but the external one remained fistulous till two pieces of cloth were removed, several months after receipt of the injury.

Numerous interesting cases of traumatic abscess occurring from the entanglement of foreign substances within the rectum, are on record, among them the following. Le Dran[3] relates a case, which occurred to M. Destendau, of a man who for nine months labored under fistula caused by the lodgment of a piece of bone. Petit[4] extracted a needle, which for six months had occasioned excruciating pain during defecation. In another case he removed a small triangular bone which had been the cause of great pain for several months. In a third case there was extensive mortification around the anus, from the lodgment, of ten days' duration, of a chicken-bone. In a fourth case he opened an abscess which contained shot and feculent matter. Shearman[5] relates a case of a fish-bone being swallowed and discharged twelve months afterwards from an abscess by the side of the anus. Harrison[6] describes a case of an abscess resulting from an apple-core, swallowed

[1] "Mémoires de la Société Médicale d'Emulation," tome ix.

[2] Op. cit., p. 235.

[3] "Observations de Chirurgie," tome ii., observation lxxxvi. p. 222, Paris, 1731.

[4] "Traités des Maladies Chirurgicales," Ouvrage posthume de J. L. Petit, tome ii.

[5] "Philos. Trans." 1763.

[6] "Memoirs of the Medical Society of London," vol. v., 1796.

eight months previously. Sir B. Brodie[1] relates the following: "I was sent for to a gentleman with a very large abscess formed by the side of the gut. He suffered a great deal of local pain; had a very frequent pulse, brown dry tongue, very hot skin, and typhoid symptoms. I opened the abscess, and let out a quantity of putrid offensive matter, which sufficiently explained the typhoid symptoms under which the patient labored. And after I had opened the abscess, I introduced my finger into the cavity, and sticking across it I found a long fish-bone, which I extracted. The fish-bone had evidently penetrated through the mucus membrane of the bowel, and in all probability some small portion of feculent matter had passed by the side of the fish-bone, thus accounting for the remarkable putridity of the matter." Mr. Green tells of a case in which the pelvis of a snipe was removed from a large abscess. A case was mentioned at a meeting of the Pathological Society of London, in December, 1856, of a lady who had an abscess in the ischio-rectal fossa, which was opened; and Mr. South, on making an examination, found that it had been produced by a fish-bone having perforated the coats of the rectum: the bone was nearly two inches in length, and about half of it was projecting into the cavity of the abscess.

The symptoms and consecutive consequences of abscess in this region are greatly increased in severity by the implication of the integrity of the intestine: much, however, will depend upon the habits and constitution of the patient. The precise situation of the abscess will exercise considerable influence: if it exist on either side of the anus the symptoms will be less severe than when it is situated anteriorly, as other important and very sensitive parts are then involved and their functions interfered with: thus, in the male, the neck of the bladder, the prostate gland, and the urethra will be affected, and the flow of the urine interrupted. In the female, abscess in the anterior walls of the rectum, if allowed to pursue its course, may open in front into the vagina, and posteriorly into the rectum, and induce the very distressing condition of recto-vaginal fistula.

It is not always easy by touch to satisfy ourselves of the existence of pus in this region: readily to detect fluctuation, it is

[1] "Medical Gazette," vol. xvii. p. 27.

necessary to possess in an eminent degree the "tactus eruditus," "a gift of rare value, perhaps innate, yet doubtless capable of being acquired by the education of the finger and the judgment."[1] The difficulty arises from the elasticity of the cellular tissue, somewhat simulating fluctuation, and also from the depth from the surface at which the matter is often formed. In the latter case, we may not be able to gain any information by the appearance or by the touch of the external parts; but by introducing the finger into the rectum, we shall be able to detect it bulging into and diminishing its capacity: if fluctuation is not distinct, and there be any doubt about it, two fingers of the one hand should be introduced, and made to press the suspected abscess outward, whilst, with the fingers of the other hand, counter-pressure is made, and we shall thus be able to ascertain with greater certainty the presence of fluid.

When symptoms of the formation of acute phlegmonous abscess exist, the patient should confine himself to the horizontal position, leeches should be applied to the part, followed by hot fomentations and emollient cataplasms. If the patient be robust and plethoric, general bloodletting may be necessary, particularly if much fever exists: the bowels must be opened by mild laxatives, drastic purgatives being avoided, as they would be productive of more harm than good, by determining blood to the rectum, and inducing violent straining and disturbance of the surrounding structures: the diet must be low and unstimulating in quality: diluents, which may be freely allowed, will be beneficial in reducing the feverishness. Should there be any difficulty of micturition, the warm hip-bath must be had recourse to, and if retention of urine occur, warm anodyne enemata must be administered, should the warm-bath not be sufficient to overcome it: if these fail to afford relief, the catheter must be used before the bladder becomes over-distended.

We must not be too sanguine in adopting these means to prevent the formation of pus, though we shall occasionally succeed in doing so; yet if we do not, we shall have lessened the force of the morbid action. When it is evident that the formation of

[1] "Principles of Surgery," by James Miller, F.R.S.E., Second Edition, 1850, p. 208.

matter cannot be prevented, comfort and benefit will be derived from the application of hot fomentations and warm cataplasms, by their soothing and relaxing effects on surrounding parts. As soon as there is sufficient reason to suspect the presence of pus by the accession of rigors, by detecting fluctuation, or by a feeling of bogginess in the centre of the hardened part, a free incision must at once be made: waiting till the superimposed tissues are thinned, and pointing of the abscess takes place, is a practice to be avoided, as the cavity of the abscess will increase, and there will be a greater probability of the bowel being denuded, or a communication being established by the formation of an opening for the exit of the matter through it, in which case fistula in ano is certain to be the result.

Opening an abscess is a very simple operation, and easily accomplished; but having frequently witnessed the infliction of unnecessary pain by the incision being made improperly, I may be pardoned here saying a few words on the manner in which it ought to be done. A variety of instruments of different forms are sold in the shops, under the title of abscess-lancets; but not one of which is half so good as a simple straight bistoury, with a fine point and smooth sharp edge; it should be held lightly between the thumb and first two fingers of either hand, if the operator be ambidextrous, so that in the case of any unsteadiness or sudden movement on the part of the patient, the hold may at the moment be relcased. The blade of the bistoury, held perpendicularly to the surface, should be gently pushed into the soft parts till the point has entered the suppurating cavity; this will be ascertained by the cessation of resistance to its onward progress, and by the freedom of motion admitted, also by the matter welling up by the side of the instrument; after the point has been made to penetrate a sufficient depth, the handle should be inclined somewhat, and, by a slightly sawing motion, the incision carried to the requisite extent. By observing this method, the pain of the operation is much lessened. Abscesses are frequently opened with an ordinary lancet, which is inserted and made to cut its way out by elevating the point; this occasions much pain, in consequence of the skin, the most sensitive part of the body, hanging and dragging on the edge of the instrument. In many books, the expression, a plunge of the lancet or bistoury, is made

use of; a surgeon's knife should never be plunged anywhere; no saving of time or pain is effected by such a procedure; the limits of the puncture must thereby be uncertain; and the walls of an abscess are liable to be transfixed, or parts wounded that it would be most desirable to avoid.

When an abscess is deep-seated by the side of the rectum, and a considerable thickness of tissues exists between it and the external surface, advantage will be gained by endeavoring to make it bulge, by introducing the fingers into the bowel in the same manner as when making an examination; the knife is then to be steadily carried down to it, and, the point having entered the cavity, the incision of the extent requisite is to be made at once. Some surgeons, after puncturing the cavity of the abscess with a sharp-pointed knife, prefer enlarging the wound with a probe-pointed bistoury.

In the subacute abscess, Dr. Bushe advised several small punctures instead of one free one. I think most surgeons will be inclined to practise the latter. I have seen buboes treated in a hospital by a series of small incisions or punctures, under the idea of preventing any scars after cicatrization; but the plan was always unsuccessful: the matter not finding a free outlet, sinuses were formed, and the vitality of the integument impaired, rendering it necessary to lay the several openings into one, or to destroy the tissues by potassa fusa; and the same results would follow opening an abscess elsewhere, if the like plan were adopted.

In gangrenous abscess free incision is absolutely requisite, that the sloughs may readily be discharged; this form so far resembling carbuncle in character, in there being a considerable destruction of the cellular tissue.

After the evacuation of the contents of an abscess, a warm poultice must be applied; the horizontal position must still be preserved, and the bowels kept easy by laxatives. The diet allowed may be better than when resolution was being attempted, but it must not be stimulating or heating; beer, wine, and spirits should be prohibited, except in the gangrenous form of abscess, when they will probably be requisite, from the debilitated condition of the patient.

As there is greater disposition in the integument to heal than in the cellular tissue, care must be taken to prevent the closure

of the external opening before the cavity has healed from the bottom; this is to be done by inserting a slip of lint between the lips of the wound, but the whole cavity is not to be crammed, as was once the custom, and is still frequently practised on the Continent.

After opening a traumatic abscess, if the presence of ball, splinter of bone, portion of the dress, or any other foreign substance, can be detected, it must of course be removed.

CHAPTER XIII.

FISTULA IN ANO.

An abscess formed in the ischio-rectal fossa, although opened early by free incision, and before the cavity becomes greatly distended with pus, frequently will not heal; it may fill up and contract to a certain extent, but it does not become entirely obliterated, a narrow tract remaining indisposed, from various causes, to yield further to reparative action without surgical interference. It is this sinus which constitutes the affection designated fistula in ano.

The disturbance to which the part is subject whenever the bowels are moved, and the action of the sphincter, are assigned by most surgeons as the reason why the healing process is arrested; but may it not be attributed, with more reason, to the nature of and the several disadvantageous circumstances attending on an abscess in this locality, such as the depending position, the numerous veins that exist there, and their liability to congestion, all of which tend to retard the process of granulation and cicatrization? Moreover, when these phenomena are slow in their progress, the surface of the internal cavity assumes a peculiar organization, which, save that it is destitute of villi, somewhat resembles mucous membrane in structure, function, and the inaptitude of the opposed surfaces to unite. It is not alone in the neighborhood of the rectum, but in other situations also, that we find sinuses form, when the healing process is tardy. In complete fistula in ano, the passage of particles of the less solid feculent matter, and the gases generated in the intestinal canal, also prevent the healing process. Those who maintain the opinion that the action of the sphincter is the chief cause in preventing reparation, argue, *à posteriori*, that division of the muscle, whereby it is set at rest for a time, effects a cure; whereas the successful result depends upon laying the sinus freely open, as witnessed

when we have recourse to the same plan of proceeding in the treatment of sinuses occurring in other situations.

Fistulæ in ano are described by most writers as perfect, fistulæ ani completæ—and imperfect, fistulæ ani incompletæ; the former are those which have both an opening into the intestine and one externally; the latter have but one opening, which may either be internally in the mucous membrane of the intestine, or externally in the integument. When a fistula has no communication with the cavity of the bowel, it is called a blind external fistula; and when the opening exists only within the anus, and there is no external communication, it is known as a blind internal fistula. Blind external fistula is very rare, an internal opening almost always existing if the abscess has degenerated into that state to which the term fistulous may properly be applied. The opening into the intestine may be very small, or, from the sinuosity of the fistula, we may be unable to detect it on a first examination; yet on a second or third exploration, conducted with care and a due consideration of the position it is most likely to occupy, and the employment of a suitable probe, it will probably be discovered.

A difference of opinion exists between several eminent surgeons as to the formation of the internal opening in complete fistula. Sir Benjamin Brodie says, "I believe that this is the way in which fistulæ in ano are always formed; namely, the disease is originally an ulcer of the mucous membrane of the bowel, extending through the muscular tunic into the cellular membrane external to the intestine; and I will state my reasons for entertaining that opinion. The matter is of great importance as a question of pathology; but it is one of great importance, also, as I shall show by-and-by, in connection with surgical practice. It is admitted by every one, that in the greater number of cases of fistulæ in ano, there is an inner opening to the gut as well as the outer opening; and I am satisfied the inner opening always exists, because I scarcely ever fail to find it, now that I look for it in the proper place, and seek it carefully. I have, in a dead body, examined the parts where fistulæ had existed several times, and in every instance I have found an inner opening to it. This affords a very reasonable explanation of the formation of these abscesses; it is almost impossible to understand, on any other ground, why suppuration should take place in the vicinity of the

rectum more than in any other part of the body, and why the cellular membrane there should suppurate more than cellular membrane elsewhere. Moreover, the pus contained in an abscess near the rectum scarcely ever presents the appearance of laudable pus; it is always dirty colored and offensive to the smell—sometimes highly offensive—and occasionally you find feculent matter in it quite distinct. There is no reason why an abscess, simply formed in the cellular membrane, should smell of sulphuretted hydrogen; but there is a good reason why it should do so if it be connected with the rectum.

"This being the case, it is easy to understand why these abscesses do not heal. The least quantity of mucus, even from the gut, or of feculent matter issuing into the cavity of the abscess, is sufficient to cause irritation, and to prevent it healing; and I have, more than once, in the living person, been able to trace the progress of the formation of one of these abscesses. For example, I was sent for, to see a lady who complained of some irritation about the rectum, and on examining it, I found an ulcer on the posterior part. I ordered her to take Ward's paste, confect. piperis nigri, or cubeb pepper—I forget which. A month afterwards she again sent for me, and I found there was an abscess. I opened it, and from the outer opening a probe passed into the gut through the ulcer, which had been the original cause of the disease. The original opening of an abscess is generally very small indeed, but occasionally it is large, and when the ulceration has proceeded to some extent, large enough to admit the end of the little finger. The inner orifice is, I believe, always situated immediately above the sphincter muscle, just the part where the feces are liable to be stopped, and where an ulcer is most likely to extend through both tunics." Mr. Syme[1] remarks: "I do not hesitate to affirm, that when a fistula in ano is formed, the mucous membrane always remains entire in the first instance, and is never perforated until after suppuration has taken place." M. Ribes[2] presumed that inflammation and ulceration of piles was the common origin of fistulæ in ano; he says: "In one hundred cases of fistula of this part, ninety-nine are formed by this pro-

[1] "Diseases of the Rectum," Third Edition, p. 25.

[2] "Quarterly Journal of Foreign Medicine and Surgery," vol. ii., 1819, p. 20.

cedure, and have their origin from this cause." With all due deference and respect for the eminent authorities just quoted, I am yet compelled to differ from them as to the internal opening being always formed, either in the one way or the other. In my practice, having had the opportunity of closely observing the progress of many cases, I do not hesitate to affirm that the intestine is both primarily and secondarily implicated, perforation taking place as often from the external surface of the intestine, as commencing on the mucous surface and proceeding outwards. Abscess of the ischio-rectal fossa, terminating in fistulæ in ano, is not unfrequently the result of a bruise or other injury of the part from without; and in such cases it must be evident to all that suppuration takes place external to the intestine, the walls of which give way under the like process by which nature effects the discharge of matter on an external surface. In other cases we are able to trace the formation of the abscess, from causes acting from within, as when a patient has had ulceration of the intestine, which at the identical spot has given rise to suppuration in the loose cellular tissue beneath it, and ultimately involved the integument; or, as we sometimes find, some foreign body, such as a fish-bone, that had been swallowed, and passed through the intestinal canal, has become entangled by the internal sphincter, causing suppuration and the formation of fistula. But, however interesting the question may be, pathologically considered, it does not affect the plan of treatment to be adopted. Practically, the more important subject is the situation of the internal opening, it being essentially necessary to the success of the operation that the whole of the parts intervening between the two openings should be divided; and unless the internal opening is searched for in the right direction, it will most probably escape detection; and from this cause many complete fistulæ are considered to be incomplete, or blind external fistulæ. But the greater evil arising from the inaccurate knowledge of its usual locality is, that surgeons are led to divide the intestine much higher than necessary; and frequently, from the internal opening not being included in the incision, the disease returns, or the wound will not heal. To M. Ribes attaches the merit of investigating the question, and showing that the internal opening is never at a greater distance than an inch and a quarter from the anus. Sabatier first called

his attention to the fact. Ribes examined the bodies of seventy-five people who had fistula at the period of their death: in the majority, the internal opening was just above the point of junction of the mucous membrane of the intestine and integument of the anus; and not in a single instance did he find it situated at a greater distance from the anal margin than five or six lines. Since the publication of the results of his observations, they have been verified by several eminent surgeons; yet the practical deductions therefrom are not always at the present day properly considered or acted upon by all practising the surgical art.

The symptoms of fistula in ano are not always very acute; occasionally there is great pain, but more frequently a feeling of uneasiness only about the anus is complained of, with more or less tenesmus at stool, and difficulty in the evacuation, particularly if the bowels are costive, or the function of the digestive organs deranged; in complete fistula in ano, and in the blind internal form of the complaint, the evacuations are smeared with pus and mucus, perhaps also slightly with blood. One, and sometimes the chief, source of annoyance to a patient with fistula is the discharge, in a greater or less quantity, of purulent or muco-purulent matter, soiling the linen, making it wet and uncomfortable, and producing excoriation of the nates. In complete fistula, the escape of flatus and mucus from the intestine is a further source of annoyance, and should the fistulous channel be very free, feculent matter will also be expelled. Besides these symptoms, the minds of many people are affected with an impression of physical imperfection and weakness in their organization, rendering them miserable and unhappy. As in other diseases affecting the rectum, various sympathetic pains are experienced; they are referred to the back, the loins, and the bottom of the abdomen; pain extends down the leg and to the foot, which is not unlikely to be attributed to sciatica, unless the history of the case is carefully inquired into.

The external and internal openings differ in character according to the duration of the disease, and the cause that has given rise to it. In some cases, especially in phthisical patients, the opening will be prominent, and the edges hard and round. In others the aperture will be indicated by a crop of pale and flabby granulations, prone to bleed from slight violence done to them.

If the abscess which originated the fistula was of a gangrenous character, the opening will most likely be irregular, and the surrounding skin livid and undermined, and its vitality reduced by the destruction of the subjacent cellular tissue with the blood-vessels that ramified therein. In many instances both the internal and external openings will be very small, and liable to escape notice in a superficial examination; when such is the case, their position will most readily be detected by making pressure on the surrounding parts, and causing the matter to exude, or the fistulous track may be felt as a cord under the integument.

Generally there exists but one internal opening, and that is within five or six lines of the margin of the anus, as before stated; but now and then a second will be found; though some writers maintain such is never the case, yet others of undoubted ability and veracity have stated they have met with instances where a second, and in one instance a third, was present: and specimens in the Museum of the Royal College of Surgeons, and other pathological collections, establish the fact. In several instances I have operated when two internal openings have existed, and in a patient recently under my care the fistula opened into the bowels by three distinct orifices. We meet not unfrequently with several external openings, which arise from the abscess having been allowed to pursue its own course and burst; if it has been of the gangrenous form, it is more than probable there will be more than one external opening, or the several openings may depend on the formation of distinct abscesses at separate times, which may or may not communicate with each other.

The track of a fistula is not always direct, but in many cases is tortuous: sometimes it will be found coursing just beneath the integument to the margin of the anus, then passing upwards immediately under the mucous membrane, and opening into the rectum, or it may pass through the sphincter muscle; in which case the passage of the probe may be impeded by its fibres should the exploration produce spasmodic action. Sir Astley Cooper[1] mentions having examined the body of a man who died

[1] Lectures of Sir Astley Cooper, Bart., on the "Principles and Practice of Surgery, with Notes by Tyrrell," vol. ii. p. 326.

of a discharge from a sinus in the groin, and who also had a fistula in ano: he traced the sinus to the groin, under Poupart's ligament; it then took the course of the vas deferens, and descended into the fistula in ano.

The cavity of an abscess may extend considerably above the internal opening of a complete fistula, even for three or four inches. After gangrenous abscess, the bowel is sometimes extensively detached from its connections with the adjacent tissues, and what is termed a horse-shoe fistula will be formed; that is, a communication will exist around the posterior part of the rectum. A pathological preparation in the Museum of St. Thomas's Hospital shows this condition of the parts, and there are others in several of our museums.

When a patient complains of symptoms of fistula, a careful examination must be made: if the patient be a male, he should be desired to lean over the back of a chair, or rest with his elbows on a table: but if he be nervous, or the patient a female, it is better to place him or her on a couch or bed, with the buttocks projecting, and the knees drawn up towards the chin. The nates being separated, the external opening of the fistula must be sought for; if it be not evident to the eye, pressure must be made with the finger by the side of the anus, especially where any hardness can be felt, when most likely matter will be made to ooze out, and thereby indicate its situation. According to the side on which the fistula exists, the forefinger of the one hand, being previously oiled, must be introduced into the rectum, a probe slightly curved is then to be inserted into the external opening, and carried gently on: in females it must be directed almost transversely, as the anal concavity is less than in males. Varying the position of the point of the probe, according to the resistance it meets with, we shall soon be able to discover the internal orifice, or feel the end of the probe through the intestine, where it is denuded, and where the internal opening would be, were the fistula complete. It is necessary to bear in mind the usual situation of the internal opening, or the point of the probe may be too much elevated, and carried above it, and the surgeon commit the error of supposing he is unable to detect it in consequence of the height in which it is situated, or that the fistula is of the blind external form.

In making the exploration, no force should be applied to the probe, or it may be thrust through the walls of the sinus into the loose cellular tissue surrounding the gut, and a very erroneous impression of the course of the fistula obtained. It must be recollected that a probe is an instrument not to be directed with an absolute control, but one from which we are to gather information: it is to guide and instruct us. The probes I am in the habit of using are fashioned like the annexed woodcut, with a flat handle, which, however, is not designed that the instrument may be grasped with greater firmness, but for the purpose of affording a clear idea of the relative direction of the point when hidden from view in the cavity of the sinus. The internal opening may often be detected by those whose sense of touch is acute, either as a slight tubercle, if the sinus be callous, or by feeling a slight depression at the point where it exists.

It is no wonder that our ancestors entertained the greatest dread of fistula in ano, and considered it one of the most formidable of diseases, when we think of the barbarous proceedings which were had recourse to in its treatment. With the term fistulous was always connected an idea of callosity or diseased condensation and alteration of the structure of parts which could only be removed either by cutting instruments or caustic, and severe were the tortures the unhappy sufferers were subjected to. Some surgeons, fearing hemorrhage by excising the fistula, made use of the most active escharotics, whereby they laid the cavities of the rectum and fistula into one, while at the same time they supposed the callosity to be wasted and consumed.

Dionis[1] tells of one Le Moyne, at Paris, who acquired great reputation for the cure of fistulæ. "His method consisted in the use of caustics, that is to say, with a corrosive unguent, with which he covered a small tent, which he thrust into the ulcer, by which he daily, little by little, consumed the circumference, taking care to enlarge the tent daily; so that by the

[1] "A Course of Chirurgical Operations and Demonstrations in the Royal Garden at Paris," published A. D. 1733, p. 224.

widening of the fistula, he discovered its bottom. If he found there any callosity, he corroded it with his ointment, which also served to destroy the coney burrows; and at last with patience he cured many. This man died old and rich, by reason he made his patients pay very well for their cure, in which he was in the right; for the public value things no otherwise than in proportion to the sum which they cost. Those who were affrighted at the thoughts of the scissors threw themselves into his hands, and though the number of rascally pretenders is very great, they never yet want practice."

Others, who had less dread on the subject, made use of various formidable instruments for cutting out the fistula. A Dr. Turner, who practised somewhat more than half a century since, used an iron scoop, which he describes as made "like a cheesemonger's taster, to be thrust up the rectum, and assist in the division of it." Mr. Pott remarks, "What ideas this gentleman had of the disease, or of human sensation, I cannot imagine."

In all ages up to the present, there have not been wanting imprudent pretenders, with some never-failing nostrum for the cure of fistulæ or some mysterious manner peculiarly their own, with which to delude the unwary sufferer. Louis XIV. had fistulæ in ano, and being unwilling to submit to the operation, various methods were proposed to him for curing the disease without incision, but being unwilling to have them tried on his own person, he caused a number of his subjects, suffering from fistulæ, to be treated by the different plans which were suggested. Dionis[1] thus relates the history:—

"In the year 1686 there arose near the king's anus a small tumor, inclining towards the perineum; it was neither inflamed; it grew slowly, and, after ripening, broke of itself, by reason that the king would not suffer Monsieur Felix, his principal chirurgeon, to open it as he proposed. This small abscess was attended with the ordinary consequences of those not sufficiently opened to admit the application of remedies to the bottom of the cavity; there was only a small orifice through which the matter run; it continued to suppurate, and at last became fistulous.

"The sole way left of curing it was by manual operation; but the great cannot always be brought to yield to it. A thousand persons proposed remedies which they pretended to be infallible,

[1] Op. cit., p. 228.

and some of them, which were concluded to be the best, were tried, but none of them succeeded.

"His majesty was told that the waters of Barège were excellent in these cases, and it was also reported that he would go to those waters; but before taking the journey, he thought fit to try them on several patients; four persons were found who were afflicted with the same distemper, and sent to Barège at the king's expense, under the direction of Monsieur Gervais, chirurgeon in ordinary to his majesty; he made the necessary injections of this water into their fistulas for a considerable time, and used the proper means for their cure, and at last brought them all back, as far advanced towards that end as when they first went thither.

"A woman reported at Court, that, going to the waters of Bourbon, in order to be cured of a particular distemper, she was by the use of them cured of a fistula, which she had before she went thither. One of the king's chirurgeons was sent to Bourbon with four other patients, who returned in the same condition they went.

"A Jacobine friar applying to Monsieur Louvoy, told him that he had a water with which he cured all fistulas; another boasted of a never-failing ointment; and yet others proposed different remedies, alleging the cures which they pretended to have done. The minister, determining to neglect no means in order to the procuring a restoration of a health so important as that of the king, caused several chambers to be furnished, in which he placed persons afflicted with fistulas, and caused them to be treated pursuant to the several methods of the boasting pretenders to cure them in the presence of Monsieur Felix.

"A year was spent in these various essays, and not one patient cured.

"Monsieur Bessiere, who examined the indisposition, being asked his thoughts by the king, freely answered his majesty, that all the remedies in the world would prove vain without manual operation.

"At last the king, to whom Monsieur Louvoy and Monsieur Felix gave an account of what had passed, seeing no hopes of being cured otherwise than by operation, on which Monsieur Felix continually insisted, determined for it; but would not acquaint any person with his resolution: he delayed it till his return from Fontainbleau, and one morning had it performed when nothing of the nature was suspected by the courtiers, who, going to attend the king's levee, were informed that he had undergone the operation, and resolutely suffered all the incisions which Monsieur Felix thought proper to be performed.

"This happened on the 21st of November, 1687. Monsieur Felix, to whom the king had left the liberty of appointing what chirurgeon he pleased to assist him, chose Monsieur Bessiere, who

was accordingly present at this operation, where besides were only Monsieur de Louvoy, and the two physicians, Dr. Daquin and Dr. Fagon. The cicatrizing was very well managed, and the king perfectly cured. His majesty also royally recompensed all those who had rendered him service whilst under this indisposition: he gave to Monsieur Felix fifty thousand crowns; Monsieur Daquin one hundred thousand livres; Monsieur Fagon twenty-four thousand livres; Monsieur Bessiere forty thousand livres, and to each of his apothecaries, in number four, twelve thousand livres; and to one Cage, Monsieur Felix's apprentice, four hundred pistoles."

The sum total of these fees equalled £14,700.

If the health of the individual is good, and all circumstances are favorable, a fistula may sometimes be made to heal without an operation. Sir Astley Cooper[1] mentions, in his lectures, two cases which were cured by injections. I have succeeded in several instances in healing them without operation, though the cure has been somewhat tedious. When a patient objects to the necessary operative proceedings, we may try other means; constant pressure must be made upon the track of a sinus, which should be injected with a solution of sulphate of zinc, or copper, or nitrate of silver. When the cavity of the fistula has been hard and callous, I have cauterized it throughout its course with nitrate of silver. The following is the manner of doing it: having ascertained the precise direction and sinuosities of the fistula, a probe is to be bent into the form that will most readily pass; it should then be coated by dipping it into the caustic melted in a watch-glass over a spirit-lamp: thus armed, it must be rapidly passed into the fistula, and allowed to remain a few seconds, and then withdrawn; a simple poultice or water-dressing should be applied for the first twenty-four hours, and after that, pressure must be made along its course. During the treatment the bowels must be kept open, and soap and water used to the anus night and morning. By these means we shall sometimes succeed in healing the fistula; but it is a plan not to be relied on. An isolated case will occur now and then, in which a fistula will close without any surgical interference. Twelve years ago a patient applied to me with complete fistula of the right side;

[1] Op. cit., vol. ii. p. 304.

the external opening was about an inch and a quarter from the anus, and the internal one between two and three lines from the anal orifice. At the time he was under the treatment of Dr. Quain, at the Hospital for Diseases of the Chest at Brompton, his lungs being seriously affected by tubercular deposit. On consulting with this gentleman, we agreed that it would not be advisable to do anything for the fistula, fearing to aggravate the pulmonary affection. He was directed to wash the anus with soap and water night and morning, and also after defecating, and not to allow the bowels to become constipated. The fistula healed about six months after I first saw him. He continued under the judicious medical treatment of Dr. Quain, and his health greatly improved; but in the early part of the autumn of 1855 he caught a severe cold, which increased the activity of the tubercular disease of the lungs, and terminated his life.

We must not delude ourselves or our patients with the idea that fistulæ can often be cured without an operation: however, we now have the satisfaction of knowing that the formidable proceedings of former days are not requisite, and that an incision of limited extent is all that is necessary; the operation occupies only a few seconds, and causes comparatively little pain. But there are some persons whose nervous susceptibilities are so exalted, and the dread of cutting instruments so great, that no reasoning or persuasion will induce them to consent to the best and easiest plan of treatment. Under these circumstances recourse may be had to the ligature. In past time it was frequently employed; but the tediousness of the process, when the ligature had to ulcerate through any thickness of parts, and the irritation that frequently attended its use, led to its being discarded. Mr. Pott[1] thus expresses his opinion: "The terror which a cutting instrument necessarily carries with it, the fear of a flux of blood from some considerable vessels, together with a strange, nonsensical opinion that a gradual division of the parts was followed by a more sound cure than an immediate one by cutting, produced the coarse, unhandy method by ligature. . . . But as the whole operation is, on every principle of ease, expedition, safety, or certainty, unfit for practice, it would be an abuse of the

[1] Op. cit., vol. iii. pp. 125, 126.

reader's patience to dwell any longer upon it." Sir Astley Cooper says: "Timid persons prefer this mode of treatment to the knife, although in the one case the irritation is long continued, and in the other, the pain is only of a few minutes' continuance. . . . That it succeeds in some instances I have known, for some of my patients, having submitted to this remedy, returned to me well. . . My objection to it is, that the irritation it produces is liable to occasion other abscesses whilst healing that for which it is employed."

Mr. Luke revived the use of the ligature, and invented several instruments for passing and tightening it: in the first volume of the *Lancet* for 1845, are drawings and descriptions of these: he also recites nine cases treated by this method, but I believe he now regards incision preferable to it. I have on one occasion had recourse to the ligature, as the patient would not consent to any other operation, and a cure was effected. The ligature was kept tense by attaching an India-rubber ring, such as is now generally used to secure papers together, which being put on the stretch, was fastened to the buttock by a strip of plaster.

Since Mr. Pott propounded his principles of treatment of fistula by simple division, and proved the soundness of those principles in a very extended field of public and private practice, the objectionable operations formerly in vogue have in this country been almost entirely set aside. Yet some surgeons may still prefer the principles and practice of our forefathers. Mr. Syme[1] remarks: "As was to be expected, however, many practitioners clung to the methods in which they had been educated; and even in the present day there are some who, whether from imbibing the bad example thus transmitted to them, or from an unhappy peculiarity of judgment, still prefer the old and unjustifiable process of excision. I have seen an eminent professor of surgery in Paris cut out the fistula, and understand that he continues to pursue this practice. Some years ago, a middle-aged woman came under my care in the Surgical Hospital, on account of a recto-vaginal fistula, and stated that the complaint commenced with a fistula in ano, for which she had had an operation performed by the surgeon of a provincial hospital, who cut some-

[1] Op. cit., Third Edition, pp. 35, 36.

thing out and laid it on the table, since which there had been a communication between the rectum and vagina. More lately, a gentleman from the North of England applied to me on account of some unpleasant consequences resulting from an operation, or rather, series of operations, to which he had been subjected on account of fistula in ano. His principal complaint was inability to retain the contents of his rectum, which, notwithstanding the resistance of a carefully-constructed bandage, were wont to be suddenly and involuntarily discharged, so as to cause great discomfort, and constant apprehension. Though prepared to find something far wrong, I was not less surprised than shocked, upon inspecting the seat of the disease, to see no appearance of an anus, but instead of it, a deep excavation, at the bottom of which the mucous coat of the bowel presented itself to view, completely divested of the sphincter. From these and other facts of the same kind that might be mentioned, I fear it must be concluded that the plan of excision is still not entirely abandoned; but, feeling assured that those who persist in adhering to it, notwithstanding all that has been said and written on the subject, would not have their views altered by any argument in my power to use, I shall leave them to follow the progress of improvement at their own leisure."

When it was the custom to divide the rectum throughout the entire extent of the fistula, a simple knife was not by many deemed sufficient, and "ingenious, mechanical, and whimsical people have busied themselves in inventing instruments for this purpose: the syringotomy, the cultellus fulcatus, the probe razor, &c., have at all times been in use; scissors also of various kinds, both straight and crooked, have been employed in this operation; the first three may be made to serve the purpose very well; but to the last (the scissors), there is in this, as well as in almost every operation in which they are frequently used, a palpable objection, viz., that by pinching at the same time they cut, they occasion a great deal of unnecessary pain. They are, I know, in great use with many, who, if they were deprived of their probe scissors, would think themselves incapacitated from doing business; but they are, upon all occasions where mere division is required, a very bad instrument; they may assist an awkward or an unsteady hand, but they are more fit for a farrier than for a surgeon. . .

In all chirurgic operations, the instruments made use of cannot be too simple nor too keen."[1]

The importance and advantages of the observations of M. Ribes regarding the situation of the internal opening of a fistula, and the principles deduced therefrom, namely, that it is not necessary for effecting a cure of the disease to carry the incision to a greater height than where it exists, or where the mucous membrane is denuded and thinned, if there is no internal opening, is now fully established. Mr. Syme, the eminent professor of clinical surgery, of Edinburgh, has for years inculcated and acted upon these principles in his practice, and testifies to their perfect success: I have never carried my incisions higher, and have never been disappointed in the result. But some surgeons of great ability and eminence in the profession, and writers of high authority, have pursued the practice of Mr. Pott. Sir Astley Cooper[2] advises: "If any portion of the sinus remain above the opening into the rectum, it should be divided with the probe-pointed scissors." Mr. Copeland carried his incisions to the bottom of the sinus, and expresses surprise that Mr. Pott, in his treatise on fistula in ano, should have passed unobserved the hemorrhage that sometimes takes place from the incision, and the difficulty of arresting it: and he further says: "I will venture to say that it has occurred to almost every surgeon who is in the habit of performing this operation."[3]

The same author gives the following cases in illustration:—

"A carpenter, about thirty years of age, had the operation for fistula in ano performed on him in the year 1803. There were two extensive sinuses in the nates divided, but the principal one extended above three inches up the side of the gut, and then perforated it; this also was laid open. There was considerable hemorrhage at the time of the operation: but the patient fainted, and the bleeding stopped; and when the wound was dressed, he went to bed. After he had been in bed about an hour, the hemorrhage returned, and the bleeding artery was so high up the sinus as to be entirely out of the reach of the needle and ligature; the gut, therefore, and the wound were filled up with compresses

[1] Pott, op. cit., pp. 111, 112.

[2] Op. cit., p. 330.

[3] "Observations on the Principal Diseases of the Rectum and Anus," by Thomas Copeland, 1824, p. 86.

of lint, wet with spirit of turpentine; and for some time, it was thought that this mode of compression had succeeded in stopping the hemorrhage; but, during our fancied security, his pulse became hardly perceptible, his lips pale, and the whole body was in a cold sweat. He was now supported by wine and other cordials; and in a short time the hemorrhage burst out again, with as much violence as ever, and continued for more than an hour. All the compresses were now removed, the rectum cleared as much as possible of coagulated blood, and the wound left without dressings. The hemorrhage stopped, and did not return again, but very large quantities of coagulated blood were evacuated with the feces for three days afterwards. He was, as may be supposed, extremely debilitated by this loss, but finally recovered his strength, and his fistula was dressed and cured in the usual way."

"A gentleman, about fifty-six years of age, who had been subject to complaints of the liver, and frequent hemorrhage from the nose, had the operation for fistula in ano performed. A sinus leading into the rectum about an inch from the anus, was first divided, and then another passing towards the os coccygis: the opening of this last discovered another sinus penetrating the gut about an inch or rather more above the former one which had been divided. This was also laid open, and the wound bled very freely; but the orifice of the bleeding vessel could not be discovered. In a short time the hemorrhage diminished, and the wound was dressed in the usual way, by introducing a piece of lint from the gut into the divided sinus. There was some degree of hemorrhage nearly the whole night, and in the morning a small artery was discovered, and a ligature passed round it: but the bleeding continued and increased very considerably, when he had an evacuation in the middle of the day. The wound was cleared of all the dressings, together with the coagulated blood, and the hemorrhage ceased.

"During the succeeding night there was no bleeding, but in the morning it returned when he had a stool, and he lost about four ounces of florid fluid blood. The wound was now filled with lint, wet with Ruspini's styptic, which happened to be at hand; there was a little hemorrhage during the day, and in the following night, which, however, he passed tolerably well, and

the wound began to suppurate plentifully. But when he had an evacuation of the feces, the bleeding again returned, though in a less degree, and for many days he lost some ounces of fluid blood every time he passed his stool. At last it ceased altogether, the wound went on well, and in about six weeks was quite healed."[1]

Mr. Liston[2] was in the habit of dividing the sinus to the bottom, and on several occasions, when I have assisted him, I have been obliged to make pressure for some time to arrest the hemorrhage. Mr. Fergusson[3] does not appear to appreciate the advantages of a limited incision in fistula in ano, as, after speaking of the position the surgeon should place himself in, he says: "He should then introduce the end of a probe-pointed bistoury through the external opening, and push it slowly along the sinus until it reaches the upper extremity." Again:[4] "I believe it is best to open a sinus throughout." Dr. Bushe, whose practice was very extensive, divided the textures as high only as the internal opening into the rectum, and always found it sufficient for the cure.

When a patient with fistula seeks surgical assistance, and an operation is deemed advisable, the general health must be first attended to, if at all impaired, due attention being paid to the functions of the liver, kidneys, and skin. It is also very important that a careful examination of the bowel be made, to ascertain the presence or not of any other rectal disease. From a neglect of this precaution, I have met with several cases of fistula that have been operated on, and the healing process prevented by the presence of a hæmorrhoidal tumor in the wound. I have likewise been called in to operate on patients with fistula who have also had cancer of the rectum; and had this been undetected, the patient's death would have been attributed to the operation, if performed, and not to the more serious and surely fatal disease. On the morning previously to the operation, the bowels should be acted upon by a mild cathartic, and an enema of warm water

[1] Op. cit., pp. 159–163.

[2] "Elements of Surgery," by Robert Liston, Second Edition, p. 564. "Practical Surgery," by Robert Liston, Fourth Edition, p. 438.

[3] "Practical Surgery," by William Fergusson, Third Edition, p. 747.

[4] Ibid., p. 748.

or thin gruel administered; the operation is then to be performed in the following manner. The patient, kneeling on a chair, and resting on the back of it, or leaning with his elbows on a table, or lying on a bed or couch, with his knees drawn up, and the nates projecting, an assistant separates the buttocks, and the surgeon, introducing the forefinger of the right or left hand into the rectum, according to the side on which the fistula exists, makes himself familiar with its track and position by using the probe as previously directed: having accomplished this, he passes the blade of a probe-pointed curved knife into the external orifice along the course of the fistula, making it emerge through the internal opening, the point being hitched by the finger in the rectum; both hands are then depressed, and with a slight sawing motion the intervening tissues are divided, and the knife and finger brought out together. If the surgeon be timid, or unaccustomed to operate, or the fistula so tortuous that the knife cannot readily pass along its track, a grooved silver director, or strong probe, may be used; it must be bent as required, and, having been introduced through the opening in the integument and that in the bowel, the end is pulled down, and made to protrude at the anus; the parts are then to be divided by passing a sharp-pointed curved bistoury along the grooved channel, and the operation is finished. This plan occupies a few more seconds in performing it, and occasions somewhat more pain than the other.

When more than one external opening exists, or sinuses extend towards the hip, the whole of them must be laid open at the same time, or a second operation will be necessary, which the patient may not be willing to submit to, and the cure will be protracted. In the writings of a late very distinguished surgeon, it is recommended to lay open and heal the sinuses in the buttock before dividing the fistula; but no possible advantage can be derived therefrom.

When the incisions are completed, a strip of lint or fine carded cotton must be inserted between the divided surfaces to prevent their uniting again, as, in order to cure the fistula, the wound must heal by granulation. The wound must not be crammed, as is sometimes done, or irritation will be produced. It is generally desirable to administer an opiate after the operation, rather to

prevent the action of the bowels for two or three days than with any other intention.

The first dressings are not to be removed by the surgeon, but allowed to remain till the bowels act, and they will then come away with the feces; if they are not moved of their own accord by the third day, an aperient must be administered, and, after its operation, the wound must be cleansed, and another piece of lint inserted. Till cicatrization is complete, care must be taken to prevent the bowels becoming constipated, and recourse must be had to medicines and enemata of thin gruel for this purpose as occasion arises. Some consideration and attention in regard to the dressings is necessary, for if they are not properly applied one of two evils occurs, either the incised surfaces unite and the fistula is re-established, or the wound will not heal, and the patient is doomed to more or less incontinence of feces: the first is the result of not putting the dressings sufficiently into the wound to prevent contraction of its edges before granulation has taken place from the bottom; the second, the more frequent of the two, is caused by cramming the wound too much, whereby the healing process is prevented. In illustration of this, a surgeon lately expressed to me his surprise that a fistula on which he had operated would not heal, notwithstanding he had crammed the wound daily for more than twelve months." After the first week or ten days, I find it adds greatly to the patient's comfort to discontinue the insertion of lint into the wound, and to use instead an ointment with a syringe, as described in the chapter on hæmorrhoidal affections (page 116). As the cure proceeds, if there should be insufficient reparative action in the part, nitrate of silver, sulphate of zinc, sulphate of copper, or the like, in solution or substance, must be applied, in order to excite the required degree of stimulation for the purpose of cicatrization.

At first, the patient must be confined to the recumbent position, and his diet must be spare if he be plethoric; but if, on the contrary, his vital powers be low, we must be more liberal in the quantity of food allowed, and we may also find it necessary to order a certain amount of wine or beer, and to prescribe bark and other tonics.

Bleeding is of very rare occurrence when the operation is performed in the manner just described, though it is by no means

uncommon when the incision is carried unnecessarily high: should it occur, the finger is to be introduced into the rectum, and lint passed along it so as to fill the wound; gentle but firm pressure is then to be maintained for a time, and it will be very rarely that anything else is required; however, should the bleeding continue, the bowel must be dilated with a speculum, and any vessel that is seen secured with a ligature. Elevating the pelvis, and applying a bladder containing pounded ice to the sacrum and anus, will assist in suppressing the hemorrhage.

When the fistula is of the blind internal form, our method of proceeding must be different. The internal opening is then to be found; it will be indicated by the escape of matter when pressure is made externally, or acute pain will be felt at one spot, and will inform us of its position: a probe more or less curved, or bent at an angle, if the opening is not close to the anus, must be passed into the sinus, and the end made to project against the integument: with the point of a knife an incision is then made down on it, and a complete fistula will thus be formed: the operation is then to be finished with a curved knife as just directed.

External blind fistula, extending to the coats of the intestine, must be made into a complete one by perforation of the bowel with a knife: the point at which this must be done is where the internal opening is usually found: when the forefinger is introduced into the rectum, and a probe directed along the course of the fistula, the point will be plainly felt at a particular spot where the mucous membrane is denuded and thinned. A knife similar to that used in operating on complete fistula is made to follow the same channel as the probe, and the point being felt by the finger placed within the anus, is pressed onward against the edge of the nail, and by a slight motion made to cut through the intestine; the point is then depressed, and the intervening tissues divided. As the surgeon's finger is very liable to be wounded in cutting through the gut, it has been proposed to pass a wooden gorget into the rectum, and to cut on that, but if the end of the nail be presented to the point of the knife instead of the pulp of the finger, the operator will escape injury.

Savigny invented a bistoury especially for this operation: it had two blades side by side, the one having a round point, the

other a sharp one, the latter being made to project beyond the former when required. The blades were passed in the usual way, and the probe point being felt pressing against the intestine, the sharp-pointed blade was projected, and the bowel perforated; the pointed blade was immediately retracted, the conjoined blades being then carried through the puncture, the incision was finished as with a common bistoury. The instrument is ingenious, but not necessary to a surgeon capable of performing the operation; besides, the conjoined blades make the instrument thick and clumsy. The ordinary curved probe-pointed bistoury, recommended by Percival Pott, and known as his knife, answers every purpose, but is larger than is required; one of the size and form of the annexed figure will be found most convenient. I have the blade made somewhat thicker in the back than in the common bistoury, which renders the button at the end superfluous, and the edge at the point can be kept in better order. In using the ordinary bistoury, an accident is liable to occur by the instrument breaking; this may result from the unsteadiness of the patient, or from the density and cartilaginous induration that takes place in the tissues, when the disease has been allowed to continue for years, but chiefly depends upon the fashion the instrument-makers have of grinding the blade thinner and notching it at the termination of the cutting part. I have witnessed this accident happen to Mr. Liston; on the occasion he passed a second knife along the broken blade, which fell from the wound on the completion of the incision. To guard against any inconvenience arising from such an accident, he recommended the operator always to be provided with a second knife.

By far the larger proportion of fistulæ in ano admit of remedy by the slight incision which has been shown to be all that is requisite; but, before performing it, or giving the patient an opinion on the probability of its affording relief, we must ascertain if any constitutional or local cause exists that may be likely

to render the operation unsuccessful, or disappoint the hopes of the patient.

It has already been observed that affections of the thoracic and abdominal organs predispose to this disease, which then stands only in relation of effect to the primary malady, and therefore success is not likely to attend our efforts whilst the cause remains in active force. The most common cause that will render a prognosis unfavorable regarding the result of an operation, is the patient being the subject of phthisis: in which case, if the operation be performed, the wound will not heal; or should it do so, the probable result will be, either the formation of a fresh abscess, or the aggravation of the pulmonary disease. However, it is not every case that must deter us; we have now ample proof that phthisis is not the hopeless disease that it was formerly considered, and that after symptoms of pulmonary tubercle have existed, patients recover, and live free from any complaint for many years; therefore, when applied to under these circumstances, if the issue of the thoracic disease be uncertain, or there is a prospect of recovery, we are not justified in withholding our attempts to cure the lesser affection, but which in the imagination of the patient is the greater evil, and occasions much discomfort and annoyance; besides, declining to operate, is apt to induce a state of hopeless mental depression and despondency. On the other hand, though the operation may be performed at the particular desire of the patient, it would not be prudent to propose or urge it in advanced phthisical cases, or the surgeon may bring great discredit on himself.

Among the causes of abscess in the anal region was mentioned perforation of the coats of the intestine by fish-bones, spiculæ of bones, and other substances which had been swallowed. An abscess thus formed, as a matter of course, will not heal so long as the foreign body is allowed to remain. The patient seldom recollects, or is even aware of having swallowed any hurtful substances; therefore it is only by examination with the finger or probe that the substance, whatever it may be, can be detected. The fistula is to be operated on in the ordinary manner, and if the foreign body cannot be removed without lacerating the parts, the incisions must be enlarged.

As a consequence of abscess in the perineum, fistulous commu-

nications may be established with the rectum and urethra; this complicated form of disease is usually the result of the abscess spontaneously discharging itself into those passages—the fascia of the perineum retarding its outward course—instead of its contents having been evacuated by early incisions; external openings sooner or later take place, and are situated near the root of the scrotum or verge of the anus. The patient now is in a pitiable condition; a fetid discharge from the external orifices is a source of great misery; urine escapes from the rectum, and thin feculent matter and flatus from the urethra: not unfrequently stricture of the urethra exists with this form of disease; in which case it is necessary to dilate it before proceeding to remedy the fistulæ. The internal opening in these cases is generally higher in the bowel than in ordinary fistulæ. In operating, the same principles must be acted on as in the simple form of fistulæ; the intervening tissues between the internal opening and that nearest the anus are to be divided, then the sinus between that and the urethra is to be exposed; some dry lint is to be inserted into the wounds, and the after-treatment conducted on ordinary principles. Sometimes a small fistulous communication will remain between the rectum and urethra after the wounds have healed externally, permitting a few drops of urine to escape by the bowel occasionally, proving a source of annoyance to the patient, and causing a fear of a return of his former condition. The rectal orifice must be brought into view by the speculum ani, and the closure of the fistulous track will be effected by passing along it a probe coated with nitrate of silver, or a wire heated in a spirit-lamp or by the galvanic current.

Fistula in ano will sometimes coexist with stricture of the rectum, in which case the internal opening will be above the constricted portion of the intestine, if ulceration and abscess have ensued, as a result of the pressure and irritation induced by the resistance offered to the evacuation of the feces; but, although associated with stricture, the internal opening may still occupy its usual situation, and the fistula may have been caused either by the irritation excited by the stricture, or independent of it.

When the opening is above the preternatural contraction of the intestine, the latter must be dilated before any incisions are

practised for the cure of fistula; and when the fistula is below the stricture, we shall effect but little benefit till the rectum is restored to its natural calibre.

Fistula connected with diseases of the sacrum, ilium, or pubis, cannot be benefited by incisions so long as the osseous parts remain diseased; if any portion of the bone be necrosed, it must be extracted, or be thrown off by nature, before a recovery can be looked for. Mr. Syme[1] mentions two cases connected with disease of bone; the one a man who had been repeatedly operated on for fistula in ano, without obtaining relief: a careful examination discovered an exfoliation from the tuberosity of the ischium lying in a capsule formed by the origins of the flexor muscles of the leg. The second case—that of a young woman, who suffered from fistula in ano: a probe being felt to grate against a hard substance, it was extracted, and found to be a thin scale of bone, probably detached from the arch of the pubis.

In the *Lancet*[2] there is an account of a man, aged forty-seven, who was in St. Thomas's Hospital, having fistula in ano, for the cure of which the usual operation was performed, but without benefit, and the patient continued to experience excruciating pain; subsequent examination discovered the rectum to be considerably ulcerated, and partaking somewhat of the characters of cancer: this condition was ultimately discovered to depend on caries of the sacrum. A few years since[3] there was a man at the Marylebone Infirmary with fistula in ano, connected with necrosis of the tuberosity of the ischium; the dead bone was removed by operation.

Abscess from disease of the hip-joint, in its advanced stage, usually opens posteriorly, and below the articulation, but sometimes matter will burrow and effect an opening near the anus: it is scarcely necessary to say, in such a case, the operation with the hope of curing the fistula would be entirely useless.

The subjoined cases are examples of some of the more ordinary forms of fistula in ano.

[1] "On Diseases of the Rectum," Third Edition, pp. 54, 55.
[2] Vol. ii., 1855, p. 461. [3] Oct. 1856.

Fistula in ano, the effect of a kick.

A young gentleman, æt. seventeen, at one of the public schools received a kick from a companion, which was followed by the formation of an abscess; it was allowed to burst, and beyond keeping some lint to the part, to prevent his linen being stained, nothing had been done: during the vacation he came under my care. I found an external opening between one and two inches from the anus; a probe passed into this could be felt by the finger in ano, in contact with the walls of the intestine, which were very much thinned; no internal communication could be discovered. Constitutional treatment was had recourse to for a few days, and after the bowels had been thoroughly unloaded, an incision was made through the sinus and bowel from the point at which it was denuded. It was deemed advisable to keep him in bed for a week; the bowels were kept easy by laxatives, and an enema of eight ounces of thin gruel injected every morning; the wound was lightly dressed, and in about three weeks had quite healed. In this case, had the operation been delayed, an internal opening would undoubtedly have been formed at the point where the probe was felt through the thinned mucous membrane.

Fistula in ano; two external openings; operation; cure.

Mrs. ——, æt. twenty-seven: when I was consulted she had been married six years, and had had no family. Two years previously to her marriage she experienced heat, itching, and fulness in the rectum: these symptoms increased, and after a time she occasionally lost a small quantity of blood at stool. A few months after marriage an abscess formed near the anus, preceded by heat and severe throbbing pain: she used poultices and it broke, the skin giving way in two places. Previously to the abscess bursting, she had observed by her linen that there was a slight purulent discharge from the anus. After the matter had obtained vent, she had less pain, but continued to have great uneasiness, and was annoyed by a constant discharge of pus.

On making an examination two small fistulous openings presented, one being about an inch from the anus, and the other an inch and a quarter from the first, its direction being outward and backward; a fistulous track, extending between the two openings, could be felt like a cord beneath the finger; at an angle with this sinus, another could be felt extending towards the bowel; a probe readily passed from the one external opening to the other, but, from the acute angle formed by the two sinuses, it could not be made to enter the bowel. At a quarter of an inch above the anal orifice, a small hard tubercle could be felt; and pressure produced some pain at this point. She had always been of a costive

habit, and had not been accustomed to take much exercise. Her pulse was not quick, but rather sharp; her tongue was furred and notched, and she was much troubled with flatulence; the renal secretion was disordered, there being an excess of uric acid. Medicines were prescribed to unload the bowels and improve her general health. After persevering in these for ten days the operation was performed. She had taken a dose of castor oil early in the morning, and an enema had been administered an hour before I arrived at her house, by which means her bowels had been thoroughly relieved. I first divided the sinus between the two external openings, and was then able to pass a probe through the fistula into the bowel without the slightest difficulty, the end being brought in contact with the finger of the left hand, introduced into the rectum; a small curved bistoury was made to follow the probe, and the intervening tissues divided; only a few drops of blood were lost. A piece of lint was gently inserted between the lips of the wounds; and she took half a drachm of wine of opium in camphor mixture.

On the third day, the bowels not having been moved, she took a dose of castor oil; the dressings came away when it acted. After this the wound was lightly dressed each day, and in little more than a week she was quite well.

Fistula in ano, occurring from exposure to cold and wet.

I was requested by Dr. Ashwell to see General ——, who had been for some time much annoyed by a purulent discharge soiling his linen; he also experienced uneasy sensations about the anus, especially at stool, and which at times amounted to pain. The account he gave of his ailment was, that some months previously his military duties necessitated his being in the saddle the whole of a wet and cold day; on retiring to bed at night he had a sense of fulness and heat in the rectum, followed by acute throbbing pain; ultimately a lump formed near the orifice of the bowel, which burst and discharged blood and matter. By the advice of his medical attendant he confined himself to the house a short time, and applied poultices and hot fomentations locally; when the acute symptoms had subsided various lotions and ointments were employed, but the wound occasioned by the bursting of the abscess never healed. On making an examination I found at half an inch from the anal margin a small ulcer surrounded by pale and exuberant granulations; pressure caused a thin pus to ooze from the centre. Introducing a probe, it passed through the fibres of the internal sphincter and entered the bowel a little more than an inch from the anal orifice, coming in contact with the index finger introduced into the bowel. By firm pressure, the fistulous tract could be traced and felt beneath the finger like

a piece of whipcord. Dr. Ashwell fully concurring in my opinion that little was to be expected from medical treatment, General —— readily consented to the necessary operation, which I performed in the usual manner, in the presence of Drs. Ashwell and Snow. By care and attention in the subsequent treatment the cicatrization progressed very favorably and rapidly, and in a very short time our patient was able to resume the important military duties that then devolved on him. It is several years since I operated on this gentleman, and to the present time he has remained perfectly free from all local and constitutional disease.

Fistula in ano following an abscess caused by wet and cold.

F. M——, æt. thirty-five, a coachman in a nobleman's family, of moderate stature, and robust constitution. After driving the greater part of a cold wet day, he felt towards the evening a burning heat in the integument near the anus, and during the night severe throbbing pain commenced; this continued three days, when he had a slight shivering fit, after which the acuteness of the pain subsided, and resolved itself into a dull aching sensation; on the fifth day from the commencement of the attack, he applied to me. There was then very little constitutional disturbance; the tongue was somewhat furred, and his skin dry. On making an examination, the skin between the anus and the tuberosity of the ischium was observed to have a dusky-red appearance, and fluctuation was perceptible to the touch. I made a free opening with a bistoury, and evacuated about an ounce and a half of unhealthy pus; he was desired to keep a poultice to the part, and to see me in a few days.

In a week after the abscess was opened I made a careful examination with a probe, and could not detect any communication with the bowel, there appearing to be a thickness of tissues of at least half an inch between the walls of the abscess and the bowel. He appeared to be progressing favorably; and he was directed to keep the bowels regular, to live moderately, and to see me again in a short time.

He did not see me for several weeks, as he considered the abscess would heal in time; he had had pricking pain in the part occasionally, but not at all severe. I made an exploration with a probe, and now discovered the coats of the bowel denuded immediately above the margin of the anus. On the following day, with the assistance of Mr. Thompson, I divided the structures between the external opening and the denuded bowel. The wound was lightly dressed, and he was ordered to remain in bed. When I called on the following day I was surprised to find he was out. I left word for him to call at my house the next morning, which he did; I dressed the wound; it was looking very

healthy, and I desired him not to neglect seeing me till he was quite well. He came to me every morning for a few days, and he made a very rapid recovery.

Fistula in ano, and urinary fistula from abscess consecutive on gonorrhœa.

A young professional friend contracted a gonorrhœa, which he treated himself by the use of strong injections; during the time he rode much, and indulged too freely in wine. The result of these indiscreet proceedings was the formation of an abscess between the urethra and bowel; he allowed it to take its own course, and the abscess burst into the rectum and urethra, and ultimately an opening formed in the perineum, through which some of the urine passed whilst micturating. He now thought it time to give up the case, and trust himself to other hands. He was confined to bed, appropriate medicines prescribed, and a strict regimen enforced; after some weeks his general health was improved, the tissues intervening between the perineal opening and the one in the bowel were then divided, and the wound dressed in the ordinary way. When it had nearly filled up by granulation, a probe, coated with nitrate of silver, was passed along the fistula to the urethra, and allowed to remain a few seconds; on the following day, pressure by means of a pad of lint and a bandage was made. In about a month after the operation the parts had healed.

Fistula in ano from an abscess not being opened.

S. R——, æt. thirty-four, a groom, applied at the Blenheim Dispensary, suffering from a fistula in ano. He gave the following statement of its formation: Twelve months previously he had throbbing and heat near the fundament, and the skin became very tender if pressed: he concluded an abscess was forming, and had recourse to poultices, but several weeks elapsed before it burst: passing a stool gave him great pain; shortly after this he observed the fæces streaked with pus. He had continued the use of poultices, hoping the part would heal; he had also used various ointments and lotions that had been recommended to him, but without reaping any benefit from them.

On making an examination I perceived a small opening in the integument surrounded by fungous granulations, situated an inch and a half from the anus; a probe passed readily from it into the bowel, and was felt about three-quarters of an inch above the margin of the anus by the finger, which had previously been introduced. His general health was good, and the case appeared one that might be healed without incision; but as he was most

desirous to be cured as quickly as possible, I determined to divide the parts, which I did on the following day, having previously prescribed medicines to unload the bowels. In less than a fortnight the wound had quite healed.

Fistula in ano; several external openings and extensive sinuses.

H. E——, æt. forty-one, a butler, came under my care suffering from fistula. He attributed its origin to injury of the bowel by a bone that he had swallowed, which he said lacerated his inside on its passage outward, and gave rise to an abscess by the side of the fundament; he applied poultices, and it burst in six or eight days from the time he first felt pain. He continued to poultice the part, and he was in hopes it had healed, but matter again formed, and then discharged itself. This process recurred several times, and other openings formed towards the buttock. During this time he had taken various medicines, and used lotions and ointments: one gentleman whom he consulted, proposed an operation, but his occupation prevented him lying up. At length, his general health failing, he was compelled to submit himself to proper treatment. When I first saw him his countenance was sallow; the sclerotic conjunctivæ yellow; his tongue was much furred and deeply notched transversely; his pulse was soft and weak; and he had been of constipated habit for years. The integument on the left side of the anus was of a purplish-red color, and the subcutaneous cellular tissue was infiltrated and indurated; four fistulous openings existed, one was within an inch of the anus, the furthest was five inches from it; a probe directed through the nearest opening to the anus passed a considerable distance up by the bowel; by a careful exploration an internal opening was found three-quarters of an inch above the external sphincter. He was confined to his bed, and mild mercurials, taraxacum, and purgatives were prescribed: when the bowels had been thoroughly cleared out, and his countenance had assumed a brighter aspect, he took the iodide of potassium and sarsaparilla. Under this treatment the integument of the anal region became more healthy and the induration considerably diminished, but its vitality was too low to offer a hope of the healing process occurring without dividing the sinuses; I therefore laid them freely open, and also divided the tissues between the opening in the bowel and the external one. Two or three ounces of blood flowed, but no vessel required ligature. The wounds were dressed in the manner that has been directed; and, after the third day, the bowels were kept open by laxatives and enemata, and great attention to cleanliness observed. He continued the iodide of potassium and sarsaparilla for three or four

weeks after the operation, when the iodide of iron was substituted for it.

In consequence of the condition of the tissues, and the length of time the disease had existed, it was nearly six weeks before the wounds had entirely healed.

Fistula in ano; operation with perfect success; previously operated on twelve times.

Mr. A. C. came from Natal in 1860, to consult me, having suffered for some years from fistula in ano; previously he had been operated on twelve times without any permanent benefit, the fistula always being re-established after each operation. I made a careful examination, and discovered an opening on the right side towards the perineum through which a probe passed into the rectum about three-quarters of an inch above the margin of the anus. Below the external opening, and extending downwards to the upper part of the thigh, was a large cicatrix, the result of the previous operations. His general health was good, but the mucous membrane of the rectum being somewhat congested, medicines were prescribed for the purpose of remedying that condition as well as thoroughly to unload the bowels. These intentions being accomplished on the 17th of October, Mr. Potter having administered chloroform, with the assistance of Mr. Taylor, I divided the parts intervening between the fistulous tract and the cavity of the bowel. The wound was dressed with carded cotton, and a drachm of tincture of opium was given to constipate the bowels. He experienced but little uneasiness after the operation, and slept well through the greater part of the night; the next morning he felt quite comfortable, his skin was cool and his tongue clean. On the morning of the third day the bowels were relieved by an aperient, and the dressings came away with the motion. The wound was dressed each succeeding day, and in three weeks he was quite well, and subsequently returned to Natal.

The failure of the previous operations in this case probably depended on the internal opening not being included in the incisions; and it offers a very instructive illustration of the necessity of care and judgment in these operations. The requisite incision was comparatively a slight one, and, being properly performed, was followed by a speedy and satisfactory healing of the part.

May, 1862. This gentleman has just returned again to England. He came to see me, and stated he has not had the slightest symptom of any return of the disease, and his general health is quite restored. I made an examination, and satisfied myself of the perfectness of the cure.

Double fistula and acute abscess, probably caused by the improper application of nitric acid to supposed piles. Hæmaturia; calculus passed per urethram.

Mr. G——, of moderate stature, rather inclined to be stout; of active habits, being very fond of field sports; lives generously. Some weeks previous to coming to me, he had been troubled with a sense of fulness, aching, and discomfort in the rectum, for which he consulted a London surgeon, who pronounced the disease to be an attack of piles. Very slight constitutional treatment was adopted, but nitric acid was applied locally, with the effect of causing great pain and confining him to bed. Subsequently an abscess formed at the margin of the anus, which burst, followed by a second one, which likewise burst; he then went into the country, and after a short time he experienced throbbing pain, attended with swelling and hardness in the ischio-rectal fossa; he consulted Mr. Kingsford, of Sunbury, who advised him to return to town and see me. When I first saw Mr. G. he did not appear to be suffering from much constitutional derangement; his tongue was slightly furred, his countenance and eyes were tolerably clear, and his pulse moderate. On making an examination, I found two fistulous openings, the one about an inch from the anal margin, through which a probe passed into the bowel half an inch from its orifice; the other opening was nearer the anus, and the sinus passed up between the mucous membrane and the internal sphincter for an inch and a half: anteriorly the mucous membrane was ulcerated to a considerable extent, and had a peculiar appearance. He complained of having suffered for some weeks from great irritability of the bladder. I carefully examined the urine, which was loaded with uric acid and purpurates; no albumen or phosphates existed; and there being no pain at the neck of the bladder or at the end of the penis, I attributed the vesical irritation to the ulcer in the bowel.

As nothing but dividing the fistula could remedy Mr. G.'s condition, it was arranged he should return to the country for a few days and take some medicine to clear the bowels and get his system into a condition for the operation. In six days he returned to me with the intention of having what was necessary done the next day; he told me the irritability of the bladder had been greater that day, and for the first time he experienced pain at the glans penis after passing water. Having micturated a few minutes previous to coming to my house, I was unable to examine the urine, but I desired him to send some to me in the course of the day, which he did. I found it contained albumen, and under the microscope numerous blood-corpuscles were seen. I immediately wrote to him to remain in bed the next morning, and to

keep all the urine he passed for my inspection. The symptoms of stone being so strongly marked, I carefully explored the bladder the next morning by means of a lithotrite scoop, which I prefer to the ordinary sound, it being a far better instrument for the purpose when the stone is very small; for even failing to strike it, it readily falls into the jaws of the instrument, and being there can be crushed at once. I was surprised at not being able to detect a stone, but on examining the urine he had previously passed, I found an uric acid calculus the size of a pea; he then mentioned that while micturating late in the night he experienced a sensation of cutting or tearing in the course of the urethra, and fancied he heard something drop into the chamber-pot. The urine he subsequently passed was perfectly free from blood and albumen. The urinary affections being now clearly removed, in the afternoon, with the assistance of Mr. Bailey, of Mortimer Street, I divided both fistulæ into the bowel; I also made a free incision through the inflammatory induration, in the centre of which was a cavity that admitted the top of the finger; I likewise incised the ulcer before referred to. The wounds were dressed with carded cotton, a T bandage applied, and an opiate prescribed. The next day my patient was very cheerful, and far better than I could possibly expect. On the third day the bowels were relieved by an aperient and the wounds dressed. Mr. G. now, for the first time, told me of the application of the nitric acid to the supposed piles, causing the ulcer, the appearance of which had so much puzzled me. Mr. G. progressed rapidly, and was able to leave town in ten days; he subsequently called at my house a few times to report himself, and the case terminated very satisfactorily to him and myself.

From what I learned of the history of this case, I am fully convinced this gentleman suffered only, in the first instance, from great congestion of the rectum: nitric acid was then most improperly applied, producing ulceration and suppuration, with the subsequent consequences; and all this might have been prevented by a little judicious medical treatment. Mr. Kingsford fully concurred with me in these views.

Fistula in ano, perineal sinus, and large abscess between the rectum and sacrum.

Mr. D—— was sent to me by M. Elam, suffering from disease of the rectum. He stated that previous to the last eighteen months his general health had been tolerably good; at that time he became affected with dyspepsia and torpor of the bowels. Twelve months before I saw him an abscess formed near the right side of the anus: he consulted a surgeon in Wales, where he was then living; poultices and other local applications were

used, and the abscess burst; it did not heal, and subsequently another formed anteriorly: the same treatment was adopted, neither abscess being opened. Shortly before I saw him he experienced acute throbbing at the posterior part of the rectum, followed by a dull aching pain and sense of weight in the part. When he came to me his health was considerably affected, his countenance being sallow, tongue furred, pulse feeble, and he complained of a great want of strength. On making an examination, I found several sinuses, one extending from an opening external to the anal margin on the right side and passing into the bowel near the upper margin of the internal sphincter; another commencing anteriorly also passed into the bowel, and from the same external opening a sinus extended along the perineum to the scrotum; the integument anterior to the coccyx was bulging from a large abscess that had formed around the posterior part of the rectum. As no time could be lost, I prescribed medicine to unload the bowels thoroughly; this having been accomplished, I divided the fistulæ freely, and opened the abscess, evacuating nearly half a pint of unhealthy pus. This gentleman did not take chloroform, and bore the operation, which was a severe one, remarkably well; after it was performed he took a dose of opium. He passed a good night, and was much more comfortable the following morning than he had been for some time previously. On the third morning the bowels were relieved by aperient medicine, and afterwards strips of lint were placed lightly between the edges of the wounds. He was now ordered a nutritious diet and a tonic mixture of bark and nitric acid. After the first week dressing the wounds with lint was discontinued, and my plan of applying ointment with a syringe adopted. Notwithstanding the case was a very severe one, and the patient's health much deranged, yet by care in dressing the wounds, by attention to diet, and with proper medical treatment, he made a rapid recovery, and his countenance assumed a healthy aspect. A few weeks after the operation he expressed himself as feeling better in every respect than he had done for some years, and was very pleased at having suffered so little from the operation, and being so speedily cured of such extensive disease.

There can be no doubt that had the first abscess which this gentleman had, been freely opened, and proper treatment adopted in respect to his general health, that all his subsequent suffering and anxiety would have been spared him.

CHAPTER XIV.

POLYPI OF THE RECTUM.

Like the mucous cavities of the nose, uterus, and vagina, the rectum is occasionally affected with growths of the nature of polypi. They vary in structure and form, and may partake of the character of the mucous polypus, the sarcomatous species, or the malignant. Sir Astley Cooper[1] describes those observed by him as resembling a worm or leech in form, vascular, and of a deep-red color. Dr. Busche[2] thinks the mucous species the most common. Mr. Syme[3] says the disease presents itself in three different forms; the first being similar to those described by Sir Astley Cooper; in the second the growth is soft, vascular, prone to bleed, lobulated, or shreddy and malignant looking, but possessing a peduncle or footstalk, sometimes capable of sound cicatrization after being divided; in the third form which polypus of the rectum assumes, the tumor is of a firmer consistency, smoother surface, and more regularly spheroidal, or of oval form. In the *Rev. Médico-Chirurgicale*,[4] M. Leclayse describes a fungous tumor of the rectum attended with bloody discharge occurring in children. He records three cases; the ages of the patients were respectively six months, five years, and eight years. The growths appear to be of the character of the second form of polypus described by Mr. Syme; and their removal was effected by the application of nitrate of silver.

The experience of Mr. Syme and Dr. Bushe, as well as the inference to be drawn from the majority of cases of this affection

[1] "The Lectures of Sir A. Cooper, Bart., on the Principles and Practice of Surgery," edited by J. Tyrrel, vol. ii. p. 357.

[2] "A Treatise on the Rectum and Anus," New York, 1837, p. 227.

[3] "On Diseases of the Rectum," by J. Syme, Third Edition, Edinburgh, 1854, pp. 103–105.

[4] Tome vii. p. 346.

that have been recorded, lead to the conclusion that these growths most frequently occur in adults, though the greater number of cases observed by Sir Astley Cooper were in young subjects: several cases of children with polypus of the rectum have come under my observation.

The symptoms of polypus of the rectum will at first be rather annoying than painful, the patient being troubled by mucous discharge from the anus soiling his linen: as the polypus increases, weight and fulness of the rectum, tenesmus and the sensation of the presence of a foreign body will be complained of. If it be situated near the anus, it will be protruded at stool, and will require to be replaced by the hand; if it has acquired any size, and is pyriform in shape, some difficulty may be experienced in returning it within the bowel; or if long and narrow, as in one case in which I operated, it will be always protruded. When the attachment of a polypus is near the anus, the irritation it produces will cause spasmodic contraction of the terminal portion of the intestinal canal. Dr. Bushe[1] had a patient in whom the bowels contracted with so much force as to detach the tumor. The polypus was of the mucous species. After the polypus has attained a certain development, diarrhœa and dysenteric symptoms will be present, consequent on the irritation to which the intestine is subject; flatulent distension of the stomach and bowels, and other sympathetic affections, will exist; and if it be of the character of the second species mentioned by Mr. Syme, the feces will be besmeared with blood or pus; they will also be contorted and figured, leading to the supposition that stricture of the rectum exists.

In the benign polypi, the health will not usually be much affected, but in the malignant variety there is a sallow cachectic appearance of the countenance, the appetite fails, the tongue is furred, and lancinating pains in the rectum, extending up the sacrum and down the thighs, and flatulent distension of the stomach and bowels will be experienced. As the disease advances, ulceration attacks the morbid growth and extends to the coats of the intestine; a copious, fetid, purulent discharge, and hemorrhage to a considerable extent occur, by which the strength

[1] Op. cit., p. 228.

is greatly reduced; defecation is performed with difficulty, and attended with great agony; emaciation takes place, and the patient at last sinks, worn out by pain, irritation, and hectic.

Polypi of the rectum are usually solitary, but occasionally there may be more than one.

Mucous polypi are not very sensible; but they should be removed as soon as discovered, there being a possibility of their degenerating in structure, and proving fatal. Ligature presents the best means for their removal, and is that which I have hitherto adopted. Bushe recommends excision of polypi, and thinks there is no cause for the apprehension of hemorrhage. Sir Astley Cooper experienced considerable bleeding in one case, in which he excised a polypus: he usually removed them by ligature. Mr. Syme has always had recourse to that method. If the peduncle is near the anus, its connection with the intestine may be brought into view by injecting some warm water into the bowel, and at its expulsion the tumor will be prolapsed, when it must be seized with a pair of forceps and pulled down, and its point of attachment to the bowel will be seen; a ligature should then be applied around its origin, after which it may be cut off by a pair of scissors, taking care not to cut it so close that the ligature may be in danger of slipping off. If the polypus be sessile, or its stalk broad, the base should be transfixed by a needle carrying a double ligature, and tied in two portions. When situated higher up the gut, and the base not easily accessible to the fingers, a canula, similar to those employed in ligaturing polypi of the uterus, must be employed, or the ligature may be passed through a portion of gum-elastic catheter. A medical gentleman engaged in extensive practice in one of the chief seaport towns brought his mother to me, requesting my advice: for several years she had experienced great discomfort and annoyance from a polypoid growth, about six inches in length and one inch and three-quarters in diameter, connected with the posterior part of the rectum, about five inches from the orifice: it was attended with a copious muco-sanguineous discharge. I recommended its removal; and Sir Benjamin Brodie, who also saw the lady, concurred in my opinion. The patient was put under the influence of chloroform by Mr. Potter, and Mr. Knaggs making traction on the growth with a pair of strong forceps, I was able

to carry a double ligature through the base, and effectually strangulate it; I then cut it off near its connection. The ligatures came away in a few days, and the lady experienced not the slightest inconvenience from the day of the operation.

Previously to operating, the bowels should be freely acted on, that they may not require to be relieved for several days afterwards. Subsequent treatment is seldom necessary with respect to the local affection, which is the only subject of consideration now before us.

CHAPTER XV.

STRICTURE OF THE RECTUM.

When we consider the many points of analogy in structure and function of the rectum and those of the œsophagus and urethra, and of the numerous sources of irritation to which the terminal portion of the intestinal tube is exposed, it is not surprising that, like the last-named two mucous canals, it should be liable to the formation of stricture.

Contraction of the rectum is met with under two very different forms. The one consists of a contraction and induration of its coats, and deposit of lymph in the connecting cellular tissue, which, when occurring within certain limits of the anus, and coming under our observation before it has proceeded to too great an extent, is very amenable to judicious surgical treatment. But in the other form, unfortunately, we are able to do but little more than palliate the sufferings of the patient, and perhaps retard the onward progress of the disease to a fatal end. This second kind of contraction consists of those heterologous growths and degeneration of structure denominated malignant, appearing as carcinoma, encephaloid, or colloid disease. It is obviously highly essential we should consider the two forms separately, and not confound them together; for, as Mr. Syme[1] remarks, "Want of attention to this very obvious and necessary distinction has led to great misapprehension in regard to the nature of the disease, and serious errors of practice in its treatment." In this chapter it is intended to consider only the simple or benign stricture.

Stricture of the rectum results from inflammation and prolonged irritation produced by a variety of causes, and, as a consequence, the deposit of plastic matter interstitially in the proper tunics and intercellular membrane of the intestine, by which degenera-

[1] Op. cit., Third Edition, p. 107.

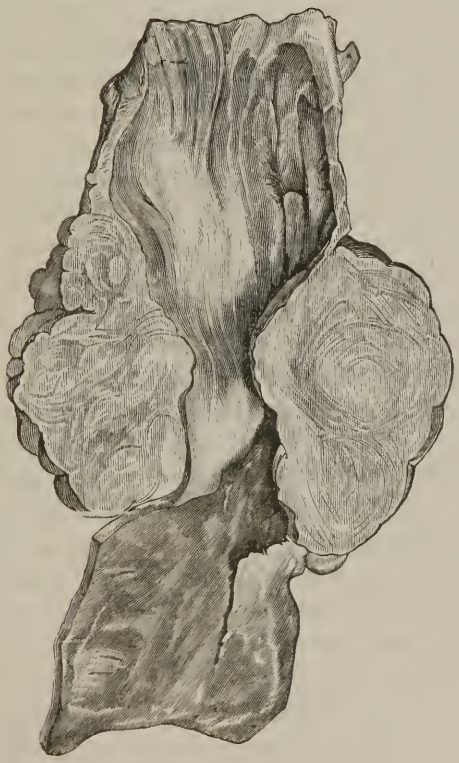
tion and alteration of the tissues are induced; the capacity of the bowel is diminished, and is still further decreased by the property of contraction inherent in the effused material.

Constipation, however induced, is one of the most frequent causes of irritation in the lower bowel, the feces lodge in the sacculi of the colon, become hard, accumulate in the rectum, and set up a chronic state of low inflammation. Prolonged indigestion, depending on functional disorder of the stomach, duodenum, pancreas, or liver, may have the same effect, in consequence of the acridness and irritating properties of the excrementitious matter; and there are very few who have not themselves, when suffering from temporary derangement of the digestive organs, experienced, during defecation, the acute scalding and irritation so frequently attending that condition. Another frequent source of irritation is the very general habit, among many individuals, of having recourse improperly and too frequently to powerful and drastic purgatives. Dysentery and diarrhœa, particularly when neglected or improperly treated, will lead to the formation of stricture, and it may also result from the cicatrization of ulcers attending the former disease. Since the second edition of this work I have had two medical men under my care, with stricture resulting from dysentery. One was an army surgeon, who suffered severely while with the army in the Crimea; the other came from the West Indies, where he had long resided. Stricture of the rectum is also caused by a deposit of fat or fibrous tissue exterior to the bowel, but more frequently the coats of the intestine will be found infiltrated with the morbid growth. A case is recorded by Mr. Travers[1] of an excessive growth of fat external to the tunics of the rectum causing contraction. I have in my possession a specimen of stricture of the rectum, from a deposit of fibrous tissue external to its coats; it occurred in a woman, aged fifty-four, who had been ailing for twenty years, and for the last three years had been subject to relaxed bowels, occasionally passing blood. Ten days previous to death she was seized with severe pain in the abdomen, which subsided in a few hours. After this constipation followed, and on the eighth day she took some castor oil; vomiting supervened, with great distension of

[1] "Medico-Chirurgical Transactions," vol. xvii. p. 361.

the abdomen and considerable pain; no evacuation of the bowels was obtained. On the following day she was admitted into a public infirmary. She was much exhausted, and complained of great pain in the abdomen, which was large and tympanitic. The previous history of the case indicating disease of the rectum, an examination was made, and a contraction of the bowel found to exist at three inches from the anus, surrounded by a dense mass of morbid structure. She died the day after her admission from exhaustion.

On post-mortem examination, the intestines were found greatly distended. No peritoneal inflammation existed. The rectum was contracted at the part already mentioned, and was surrounded



by a large mass, having the appearance of fat, and very dense; but by the aid of the microscope, as well as subjecting the speci-

men to the action of ether, it was found to be composed of fibrous tissue alone.

The specimen was brought before the Pathological Society,[1] and is faithfully represented by the engraving.

Injuries by foreign bodies, or from attempts to extract them; lacerations of the mucous membrane, or of the whole thickness of the intestinal walls, also produce stricture: in the latter case it is usually very intractable, as is urethral stricture, the result of laceration by external violence; operations for fistula in ano, and the extirpation of hæmorrhoids, when improperly performed, have given rise to this affection. Authors also mention syphilis, metastasis of cutaneous eruptions, and suppression of discharges that have existed for some time, and have become habitual, as causes of stricture of the rectum. Others are of opinion that there is frequently a predisposition to contraction of the rectum; and one recent author thinks this is not only the case, but asserts he has "repeatedly noticed several members of the same family affected with stricture."

It must not be supposed, as some writers would lead us to do, that stricture of the rectum is a very frequent disease: those who have had the greatest opportunities and the most extended fields for observation, whose acumen in the diagnosis of disease, and whose integrity is most to be relied on, have not met with this affection as a common occurrence. In the museums of our hospitals the pathological specimens are few, and those who are in the habit of seeing large numbers of post-mortem examinations meet with examples of it but seldom. In a large metropolitan infirmary in which I have had opportunities of examining many bodies, I have seldom discovered stricture of the rectum. In public and private practice I have met with not a few cases of dyspepsia, in which the symptoms simulated those of stricture, and, had I been induced to use bougies at the same time that internal remedies were prescribed, I might have deluded myself with the belief that I had cured a disease which, in reality, had never existed: however, I have the greater satisfaction in knowing I relieved all the symptoms and discomfort of the patients by very simple constitutional treatment. Dr. Bushe[2] remarks:

[1] See "Pathological Transactions," vol. vi. p. 201.

[2] Op. cit., pp. 264-5.

"Organic stricture is supposed by many to be of very common occurrence, but I have not found it to be so; for the cases I have seen bore no proportion to the number I ought to have met with, were the statements made in books correct."

The most usual seat of stricture of the rectum is within two or three inches of the anus, and it can readily be detected by the finger; occasionally it is found higher up, even in the sigmoid flexure of the colon, but these cases are very few, and their absolute existence has not generally been known till after death; on the contrary, the cases in which stricture was supposed to have existed, and absence of all contraction has been demonstrated by post-mortem examinations, are by no means rare. Some writers have expressed opinions that stricture is most common about the termination of the colon; Mr. White[1] says: "The situation in which we meet with strictures in the alimentary canal is most commonly about the termination of the colon." Mr. Salmon[2] remarks: "In the majority of cases which have fallen under my observation, the stricture has been situated between five or six inches from the anus, about the situation of the angle formed by the first portion of the rectum. Next in frequency I have discovered the disease at the junction of the sigmoid flexure of the colon with the rectum." Mr. South[3] observes: "These, however, must be very rare cases, for all the best authorities declare the stricture to be almost universally low down." Finally, I may quote the opinion of Sir Benjamin Brodie,[4] "Strictures of the rectum are commonly situated in the lower part of the gut, within the reach of the finger. Are they ever situated any higher up? I saw one case where stricture of the rectum was about six inches above the anus; and I saw another case where there was stricture in the sigmoid flexure of the colon, and manifestly the consequence of a contracted cicatrix of an ulcer, which had formerly existed at this part. Every now and then, also, I have heard, from medical practitioners of my acquaintance, of a stricture of

[1] "Observations on Strictures of the Rectum and other Affections," by W. White, Third Edition, Bath, 1820, p. 47.

[2] "On Stricture of the Rectum," by F. Salmon, Fourth Edition, p. 23.

[3] "Chelius' System of Surgery," translated from the German, and accompanied with additional notes and observations, by J. F. South, vol. ii. p. 336.

[4] "Medical Gazette," vol. xvi. p. 30.

the upper part of the rectum, or of the sigmoid flexure of the colon, having been discovered after death. Such cases, however, you may be assured, are of very rare occurrence."

Stricture varies considerably in extent; it may affect only one side of the bowel, or be confined to one of the folds of the mucous membrane which some anatomists term valves, or the whole circumference of the intestine may be involved, forming annular stricture: the same difference also exists with regard to the extent to which the bowel is affected longitudinally; the induration may be only a few lines in width, or may extend to several inches.

Stricture of the rectum attacks both sexes, and its comparative frequency in each is nearly equal; some writers having seen a majority of cases in females, whilst others have observed the reverse to obtain; however, they all agree that the difference in numbers is very slight; thus, out of fifteen cases of genuine stricture, which were all Dr. Bushe had seen, eight were females.

The period of life in which this affection usually develops itself is between twenty-five and sixty; but it has been observed as early as the ninth year, and from injury at five years of age. Dr. Bushe had a patient die of it in his seventy-second year.

Stricture of the rectum is very insidious in its progress, and the surgeon is seldom consulted till it has made considerable advances, and the symptoms become urgent. On inquiring into the history of such cases, we shall find the patient has for some time previously been subject to constipation, the bowels acting only at intervals of several days, the stools being scanty, passed in small lumps, or, attenuated and compressed; at other times diarrhœa supervenes, caused by the constant irritation to which the mucous membrane is exposed, the fluid feces being ejected as if from a syringe. Itching and heat about the anus are early symptoms. The stomach and upper part of the alimentary canal are sympathetically affected, digestion is impaired, flatulent distension and spasmodic pains in the abdomen are complained of, and palpitation of the heart, and headache, will be other sources of suffering. After the disease has progressed to a certain extent, there arises a sense of obstruction and weight in the bowel; pain in the loins, extending down the hips and thighs, irritability of the urinary organs will be induced, and in the female, there will be a sensation of bearing down of the womb; nervous irritation

and despondency will also accompany this disease. The tongue will be loaded, the countenance dull, and the functions of the liver and kidneys deranged. After the disease has existed for some time, the bloodvessels of the rectum and anus become engorged, and tumors are formed, most commonly by the extravasation of blood, which may become absorbed, and leave elongated folds of thickened integument around the anal orifice. Another consequence of vascular determination and impediment to the circulation, resulting from the condensation of the coats of the intestine and the pressure exerted by the accumulated feces, is the formation of abscess in the cellular tissue external to the bowel, which, bursting by one or several openings, degenerate into fistulæ. As the disease advances, the patient will have sudden and frequent desire to evacuate the contents of the bowels; violent straining ensues; he passes chiefly mucus and a little blood, the fecal matter, if any, being small in quantity; as a consequence, a sensation of fulness of the bowels remains, and is the reason why the attempts to defecate follow at short intervals. Sometimes temporary relief is experienced by the supervention of diarrhœa; the mucous membrane, from the irritation it is subject to, pours out a large quantity of mucus, which, rendering the fecal mass fluid, permits of its passage through the contracted channel, and by this effort of nature the whole or the greater part of the accumulated matter is discharged, and serious consequences for the time averted.

When the disease has progressed, and the passage through the intestine becomes very narrow, the patient's condition is one of great peril, and symptoms of strangulated hernia or peritonitis may supervene at any moment; the former may occur from the aperture through the intestine being too small to permit the feces to pass, or from the lodgment of some body producing obstruction, which may be a nodule of indurated feces, or the stone of a plum or cherry, the bone of a fish, or other substance that has been swallowed, becoming entangled, and occluding the opening. Obstinate constipation sets in, the stomach becomes irritable, and food or medicines when taken are instantly rejected; as time passes, vomiting increases, and will in some cases be stercoraceous, and unless the natural passage be restored, or an artificial one formed, a fatal termination will be the consequence.

In other cases, the patient may be carried off by peritonitis, which is generally induced by perforation of the coats of the intestine; ulceration taking place above the seat of stricture; while this process is going on, diarrhœa is very often present.

Unless a stricture of the rectum is within reach of the finger, and fortunately it usually is, the diagnosis must be uncertain, and surrounded with doubt; exploration by a bougie can never be satisfactory, nor can it afford us positive information, from the liability of its progress being arrested by a fold of the mucous membrane, or the promontory of the sacrum, or by a flexure of the intestine, which in some individuals may be abrupt, and also liable to alteration of position at different periods. Besides, it is impossible to introduce a bougie more than a few inches up the bowel. I have been consulted by patients supposed to be affected with stricture, and who have stated they have had instruments passed from twelve to twenty inches up the bowel by surgeons under whose care they had previously been; I have also seen the bougies that were used, and in all cases found them bent and broken in their concavity, clearly showing that they had been hatched against the sacrum or fold of the bowel and doubled on themselves. The instances are not few in which stricture has been supposed to exist, and numerous fruitless attempts have been made to pass a bougie, when, after death, no organic obstruction has been discovered. Mr. Syme[1] mentions the case of an elderly lady who had been supposed, by two medical men of high respectability, under whose care she was, to suffer from stricture of the rectum between five or six inches from the anus; he goes on to say: "Finding that the coats of the rectum, though greatly dilated, were quite smooth, and apparently sound in their texture, so far as my finger could reach, and conceiving that the symptoms of the case denoted a want of tone or proper action, rather than mechanical obstruction of the bowels, I expressed a decided opinion that there was no stricture in existence. Not many months afterwards the patient died; and when the body was opened, not the slightest trace of contraction could be discovered in the rectum, or any other part of the intestinal canal. One gentleman who had been formerly in attendance was present

[1] Op. cit., pp. 110, 111.

at this examination, and wishing to know what had caused the deception, which he said had led to more than three hundred hours being spent by himself and colleague in endeavors to dilate the stricture with bougies, he introduced one as he was wont to do, and found that, upon arriving at the depth it used to reach, its point rested on the promontory of the sacrum." But even supposing the instrument to enter a constricted portion of the gut, how are we to tell whether it is a simple stricture or a carcinomatous contraction?—a question of the utmost importance, for the treatment that would be beneficial in the former case would only aggravate the latter.

When it is desired to explore the bowel beyond the reach of the finger for the purpose of ascertaining the existence or not of a contraction higher up, it can readily be accomplished by a plan I suggested and have practised for some years. The instrument I employ consists of a long and very flexible tube surmounted by an ivory ball and adapted to a double-action keyed pump. With this the bowel can be distended with fluid, permitting readily the passage of an ivory ball; but should any contraction of the bowel exist, this will be arrested, communicating to the hand a sensation of resilience. In this, as in all other surgical proceedings, some experience and tact in manipulation is necessary. It is highly essential that the tube should be very pliable: the O'Beirne's tubes sold by instrument makers besides being of too great a diameter are much too rigid; those which I use I have made specially for me.

When a patient complains of a difficulty in defecating, and passes small and contorted stools, it by no means follows that stricture of the rectum exists; a variety of causes will produce these symptoms; they are very common in dyspeptic patients, caused by spasmodic and irregular contraction of some portion of the rectum or of the sphincter muscles: the latter is a condition of parts constantly attending ulceration of the lower part of the rectum; the pressure of a displaced and enlarged uterus, ovarian, uterine, and other pelvic tumors, abscess of the recto-vaginal septum, the impaction of alvine and biliary concretions, and in the male the enlargement of the prostate gland, may all produce the like effects.

One peculiar feature in stricture of the rectum is, that some-

times the patient's general health remains for a long period unaffected; he may have suffered from constipation or irregularity of the bowels, which he attributed only to functional disorder: cases are on record where the disease has advanced till fatal obstruction has taken place, without the disease having been previously suspected, either by the patient or his medical attendant. Usually the appetite fails, the patient becomes pale, loses flesh, and ultimately hectic fever sets in, under which he sinks by the exhaustion of the vital powers. Previously, however, to the final termination of the case, a copious muco-purulent secretion takes place, and is sometimes so acrid as to produce excoriation of the anus, and may be in such quantity as to flow outward when the slightest exertion is made, or even on the erect position being assumed.

Sometimes sufferers from stricture die from the accumulation of feces in the colon, before ulceration and hectic commence: they become melancholy and pallid, are greatly distressed by flatulent distension, the circulation is disturbed, the pulse being weak and irregular, respiration is embarrassed by the free action of the diaphragm being impeded, pains in the legs and cramps are complained of, the feet are cold, there is determination of blood to the head, producing giddiness and stupor, and, lastly, symptoms of internal strangulation supervene, which terminate fatally, unless relieved by operation.

The prognosis of stricture will be influenced by a number of circumstances depending on the degree of contraction, its condition, position, and the causes that led to its formation. If within reach of the finger, and the contraction and induration have not advanced far, we may entertain hopes of very favorable results from judicious treatment. But if the disease has progressed, the hardening being great, and the passage of the bowel much diminished, our opinions as to the prospect of a cure will be less favorable. Should ulceration have occurred, the patient is in a much worse condition, and will require very cautious treatment, or the disease may be aggravated instead of being benefited.

The object to be obtained in the treatment of this disease is, if possible, to restore the bowel to its natural dimensions, or, if that cannot be accomplished, to enlarge the constricted part sufficiently to permit the free passage of the feces. Dilatation

alone, or combined with incisions, are the means by which this is to be effected. In the majority of cases, it will not be prudent to have recourse to surgical treatment immediately, either in consequence of the irritability of the bowel, or from its being immensely distended above the point of contraction by the accumulation of feculent matter, which, pressing against the stricture, is a source of constant irritation, and tends to aggravate the disease; therefore, the importance of unloading the bowel before adopting other means must be obvious. This is to be accomplished by the introduction of an elastic tube through the stricture into the superincumbent mass of feces, and injecting tepid water, thin gruel, olive oil, or tepid water and soap; this practice must be repeated every day, or every other day, till the whole of the fecal accumulation is dissolved, and washed away; the size of the tube must be regulated by the tightness of the contraction; in some cases we shall not be able to use one larger than a urethral catheter. If much local or general irritability or restlessness be present, an opiate enema, or a suppository of the pilula saponis composita at bedtime, will be of the utmost service, followed in the morning by a mild unirritating aperient, such as the confection of senna, tartrate of potash, manna, castor oil, &c. Sir Benjamin Brodie recommends the following draught to be taken two or three times a day: balsam of copaiba, half a drachm; solution of potash, fifteen minims; mucilage, three drachms; and nine drachms of caraway-water. If inflammatory symptoms be present, blood may be taken locally, and a warm hip-bath used at night. It will be desirable during the treatment that the patient should observe the horizontal position as much as possible, and the diet restricted to that which is light and nutritious, and yields the smallest amount of excrementitious matter, such as good broths, jellies, eggs, arrowroot, sago, and the like.

Having freed the bowel from the accumulated feces, and allayed the irritability of the part, we may endeavor to restore its calibre by the introduction of bougies. These are made of various substances, of metal, wood, cloth covered with plaster and elastic gum: only those formed of the last two materials should be used when the stricture is not close to the anus. I give the preference to the elastic gum bougie, and have them made more flexible than those usually sold in the shops, which

obviates the objection urged against them by surgeons who advocate the use of those formed of plaster.

The surgeon, by previous examination, having satisfied himself of the existence of stricture, and formed an idea of the extent to which the narrowing of the intestine has taken place, selects an instrument that will pass into it without much difficulty. The patient is placed on his side, with his knees drawn up, and the bougie, lubricated with oil or lard, is passed upwards to the obstruction, and steady but gentle pressure is made against it; no force must be used, and if the resistance cannot be overcome without, a smaller instrument must be tried, till one be permitted to pass: after it has entered the contraction, it should be allowed to remain a few minutes, and then withdrawn. Some authors recommend the bougie to be left in for several hours; but such a mode of treatment is more likely to produce irritation than to effect the object we have in view. If much irritation follows the operation, the patient should have a hip-bath, and it may be necessary to inject soothing and opiate enemata. At an interval of three or four days, the operation is to be repeated; the same instrument that was introduced on the first occasion should be used again: if it passes with greater ease, it may be withdrawn, and one a little larger passed, and thus the treatment is to be pursued till a full-sized bougie can be introduced with ease, and the patient ceases to suffer any inconvenience.

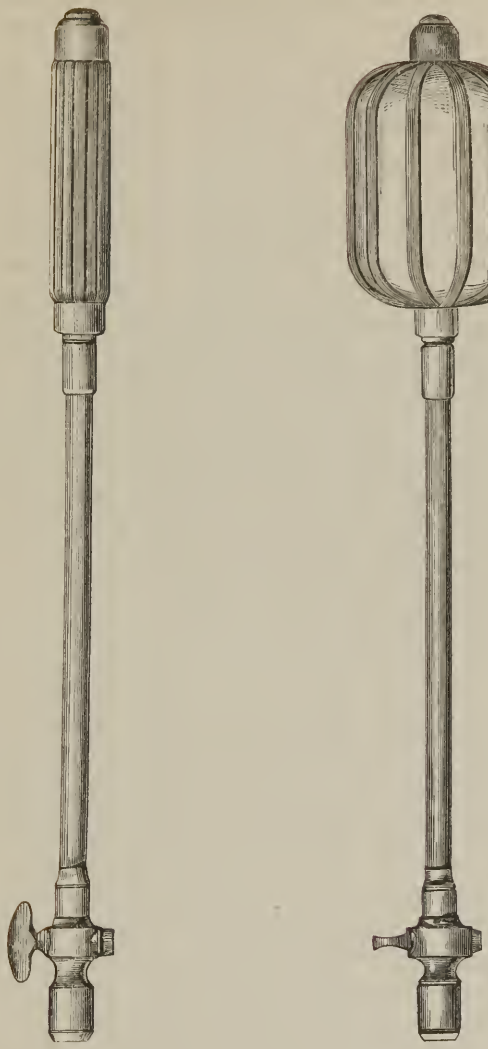
By the foregoing plan most cases of stricture of the rectum in which the deposit of plastic material is limited, and the existing induration is not great, may be successfully treated. But the cases of stricture that most frequently come under the cognizance of the surgeon are those in which the adventitious tissue is considerable, is dense and unyielding, and in them bougies of all kinds are alike useless. This fact has long been recognized, and various instruments have been invented by Weiss, Bushe, Arnott, Sir C. Bell, Charrière, Bennoud, Castallat, Coxeter, and others; and though all of them indicate much mechanical ingenuity, yet in practice they have not been found to answer the purpose. Dr. Bushe, of New York, many years since invented an instrument for making pressure in cases of hemorrhage after lithotomy, and for which it is admirably adapted: it consists of a metal tube closed at one end, and the other furnished with a stopcock: near

the closed extremity are some lateral perforations, and over these a piece of intestine is tightly secured above and below by waxed thread. A syringe is fitted to the other end of the tube, by which the intestine is distended with water. This instrument has been lately introduced as an original invention for the dilatation of stricture of the rectum by a surgeon who ought to be well acquainted with Dr. Bushe's work. But there is one great objection to the instrument in its application to the treatment of stricture of the bowel, which is, that before any pressure can be exerted on the contraction the piece of gut at the end of the tube must be distended to its utmost limits, consequently it presses upon the rectum above and below the stricture, where there is always considerable irritation, even if ulceration does not exist. The requisites of a dilator for stricture of the rectum are, that the instrument shall readily pass into the stricture and then be capable of exerting lateral pressure in parallel lines, but without dilating the anus. I may here observe, that though there is an intimate pathological analogy between stricture of the urethra and that of the rectum, the difficulties in treatment are widely different. In close stricture of the urethra considerable knowledge and manipulative skill is required to get an instrument into the stricture, but that being effected all difficulty in the case is surmounted. Not so stricture of the rectum, in which the introduction of an instrument within the contracted part is readily effected; but the difficulty here is, that the instrument itself is incapable of exerting a sufficient amount of dilating power to stretch and expand the tissue of a rectal stricture, and which sometimes exceeds one or two inches in thickness. A very little experience in the treatment of the severer form of stricture impressed on me these very obvious facts, and in all such cases I have had recourse to various contrivances effecting lateral pressure only; but though with them I succeeded in accomplishing the object, they were all more or less defective and difficult of use. One of my earliest severe cases was that of a gentleman who came from Australia to place himself under my care. The stricture was the effect of a congenital occlusion of the rectum by a dense septum, which had been perforated by a trocar, and subsequently dilated to a limited extent. During his whole life he had daily used bougies, and by constant care, and with great

trouble, managed to keep the passage sufficiently free for the performance of the natural functions. While in Australia his instruments became worn out, and being unable to procure others, contraction rapidly ensued, occasioning him great misery and suffering, and necessitating his return to England. When I first saw him the stricture would only admit a number ten urethral bougie: I dilated it till I could pass a number twelve rectum bougie; and under the influence of chloroform, administered by Mr. Clover, I explored the bowel above the rectal stricture, for the purpose of satisfying my patient's mind of the non-existence of a second contraction higher up. I made various improvements in the instrument I employed in this case, and perfected the one I now use during the treatment of an eminent surgeon from Trinidad, who came to this country to be under my care. He had a close stricture, the result of cicatrization of an ulcerated surface caused by dysentery; and in his person he presented a living monument of surgical ignorance in the treatment of hæmorrhoids, from which he had suffered; they had been removed by a confrère in the West Indies, who not only removed the piles but the internal and external sphincters also, dooming this gentleman to the miserable condition of being unable to retain the feces except by the constant use of a tight perineal bandage. I have subsequently employed with great success the same instrument in several cases; among them, that of a gentleman holding a high official position in Ceylon, who came to England for the purpose of being treated for a very close annular stricture of the rectum. On his arrival here, his general health being much deranged, he placed himself under the care of Dr. Quain, from whose advice he derived much benefit. Afterwards I freely opened the stricture by dilatation and incisions, and in a few months he was able to return to Ceylon.

In some cases of close stricture of long standing, we shall gain time by incising its margin previous to using dilatation; the best instrument for the purpose is a narrow blunt-pointed bistoury passed into the stricture, on the finger previously introduced; several slight notches are far preferable to one of greater extent, as there will then be no fear of hemorrhage, or of matter forming in the cellular tissue.

It has been proposed to destroy the indurated structure by



Note.—The above woodcuts represent the dilator closed and distended, about one-third their size. The instruments were exhibited in the International Exhibition of 1862, in the case of an instrument-maker, but were not made by him. The one that was distended was said to have burst and was removed from the case. I subsequently discovered, what appears to be a singular coincidence, that about the time of the accident the instrument-maker had received an order for one from my Trinidad patient, who had seen a notice of it in the *Lancet*.

various escharotics; but such a proceeding must always be uncertain in its effects, from the difficulty of limiting the action of the caustic, and therefore unadvisable.

When the stricture is in the sigmoid flexure of the colon, we cannot expect to obtain much benefit by bougies, from the uncertainty that attends their use in such cases. Should the contraction become so great that symptoms of permanent obstruction arise, the propriety of establishing an artificial anus, in order to save the patient's life, will be forced on our consideration. The bowel may be opened through the anterior walls, as suggested by Littre, or from the lumbar region, as proposed by Callisen, or by Amussat's modification of the latter. In the thirty-fourth volume of the *Medico-Chirurgical Transactions*, Mr. Luke has considered the merits of the two operations, and in the thirty-fifth volume there is a valuable paper by Mr. Cæsar Hawkins, in which all the recorded cases are arranged in a tabular form, and an elaborate analysis appended. Details of several of the cases are also published in the Society's *Transactions*.

CHAPTER XVI.

MALIGNANT DISEASES OF THE RECTUM.

The rectum is one of the parts of the human frame in which exists a disposition to those intractable heterologous growths and transformations of tissue, comprehended under the titles carcinoma or scirrhus; medullary or encephaloid cancer, and colloid cancer. Melanotic cancer of the rectum is not of rare occurrence in the horse; but is very unfrequent in the human subject. Mr. Moore had a patient under his care at the Middlesex Hospital, with melanosis affecting the margin of the anus. The disease was freely removed by excision, but recurred in about twelve months, in the rectum. Lately a specimen of melanotic cancer of the rectum was brought before the Pathological Society; and I have several times seen, in the dissecting-room, melanotic deposits in the ischio-rectal fossa.

Malignant disease occurs most frequently in the pouch of the rectum; in some instances it commences in the upper part, or in the sigmoid flexure of the colon; in a few cases the anus is the part first affected, the disease then assuming the form of epithelial cancer, and being of the like character to that we observe occurring in the lip and other parts.

Carcinoma or hard cancer commences either as tuberculous growths of cartilaginous consistency, projecting from the surface of the mucous membrane, or originates in the inter-muscular areolar tissue, and extends inwards, involving the other textures. In the progress of the disease, the muscular fibres become pale, degenerate, and lose their distinctive characters, in that of the morbid growth; the calibre of the bowel is diminished by contraction, and by the projection of tubercles and nodules into it. Ulceration ensues, which may extend till perforation of the bowel takes place. Abscess is sometimes formed in the ischio-rectal fossa, leading to the formation of fistula; abscess may also

occur in the cellular tissue of the pelvis, and the matter discharge itself by openings situated above the crest of the ilium, over the sacrum, and about the buttocks and upper part of the thighs; should an internal opening with the intestine coexist, these channels will constitute stercoraceous fistulæ. The pelvic bones may also become affected by caries, or otherwise involved in the disease.

The rectum in some cases is involved in cancerous disease, which has its origin in adjoining structure; it is frequently implicated when the disease has commenced in the uterus, or in the upper part of the recto-vaginal septum, and then, by the process of ulceration, a communication may be formed between the rectum and vagina; in the male the bladder is liable to be involved, or the disease may originate in that viscus, and implicate the rectum secondarily. When the bladder is the primary seat of the disease, it usually appears in the form of medullary cancer. Mr. Busk,[1] exhibited a preparation at a meeting of the Pathological Society, in 1846, taken from a boy who died of acute peritonitis. He had a tight stricture of the rectum, three or four inches from the anus; it was accompanied by ulceration of the mucous membrane, and was produced by a large deposit of medullary sarcoma external to the muscular coat of the intestine. In the greater number of cases, unless they come under our observation from the commencement, we are unable to trace the disease to the tissue or organ in which it originated, in consequence of its extending, and so thoroughly pervading the whole of the surrounding structures.

The extent to which the intestine is affected varies with the character of the disease and its duration: carcinoma may occupy the whole or greater part of the circumference, and extend from one to six or eight inches in a longitudinal direction. Medullary and colloid cancer more generally implicate only a portion of the circumference of the bowel, but its cavity will be greatly reduced by the projection inwards of large masses of the morbid structure.

We meet with malignant disease of the rectum occurring concurrently with cancerous affections of the mamma, stomach,

[1] "Pathological Transactions," vol. i. p. 67.

pylorus, and other organs, and it is very generally found as a secondary deposit in the lumbar and mesenteric glands, and in the liver.

Cruveilhier thinks cancer of the rectum, in whatever form it may appear, is mostly a local disease; but the majority of pathologists consider that malignant disease occurring in any part of the body, if ever local, is only so at a very early stage, that the constitution speedily becomes tainted, and a cachectic and malignant diathesis established: in practice, we find, when a cancerous part has been removed by operation, in the greater number of instances, it returns either in the cicatrix or other parts of the body. In April, 1855, I removed the right breast of a lady affected with cancer: the disease was circumscribed; the skin so slightly implicated that it escaped the observation of one surgeon who saw her; the glands of the axilla were not affected, and her general health apparently could not be better. But she died about four years after the operation, of cancer of the liver. The same constitutional diathesis was exemplified in a more recent case, in which I amputated the breast of a lady, the wife of a member of Parliament. She was also seen by Mr. Paget and Mr. Birkett; the disease had all the external appearances of being local, and her general health was remarkably good; although the breast was very large, in three weeks the wound had quite healed, and for some time the result was most promising. The constitutional character of cancer was strongly indicated in a gentleman I attended with Dr Quain. Cancer commenced in the rectum, and when he died nearly every organ of the body was affected. I could multiply these illustrations, were it necessary, but I believe few pathologists now entertain any doubt as to the constitutional character of malignant disease.

Malignant disease of the rectum is much more frequent than is generally supposed, and often escapes recognition till an advanced stage of its existence, the symptoms being attributed to one or other of the affections of the lower bowel. I have seen many cases where the patient was presumed to be suffering from fistula, hæmorrhoids, dysentery, stricture, constipation, &c., and a useless plan of treatment pursued, whilst the vital powers had gradually declined under the insidious advances of a fatal disease. The tendency to cancer is nearly equal in either sex; in females,

it is most frequently developed about the time of the cessation of the menstrual function. The meridian of life, in both sexes, is the period most obnoxious to cancerous affections; but no age is exempt; encephaloid disease is more likely to attack the young than carcinoma. Bushe[1] saw a case of the former in a boy of twelve years; and Mr. Busk's patient, previously referred to, was sixteen years old; and I have attended several patients with cancer of the rectum who were under twenty-five years of age.

The symptoms occasioned by cancer of the rectum vary considerably in different individuals, and are often of very opposite characters: this fact may partly account for the reason of cancer of the bowel so often remaining undetected and even unsuspected, the patient's sufferings being ascribed to functional derangement, or to some other malady affecting this part. We sometimes find obstinate constipation to be one of the most early and prominent effects of cancer, involving the lower portion of the intestinal canal, and arises from the morbid growth projecting into and narrowing the capacity of the bowel, and also annihilating the function and power of contraction. In other cases the reverse will be observed, diarrhœa, induced by irritation, being present: the patient experiences a frequent and urgent desire to go to stool, but passes only a small quantity of fecal matter, with mucus and perhaps a little blood, the sensation of fulness of the bowel remaining unrelieved. This constant desire to defecate is sometimes most tormenting, and is a source of great distress to those affected, preventing sleep, and rapidly inducing exhaustion. This was forcibly illustrated in the person of Colonel L——, who arrived from Ceylon, in February, 1862, to consult me. His exhaustion was so great from the above cause that it was anticipated he would die on board ship; and when I first saw him, I thought his life would speedily terminate; however, by the use of sedative enemata, combined with constitutional treatment and proper diet, the bowels were quieted, he obtained sleep, and in a few days was able to be about. And though the disease could not be cured, the latter part of his life was rendered much more tolerable. Whatever may be the character of the disease, whether carcinomatous, encephaloid, or colloid, it makes considerable progress in the majority of cases, before giving rise to any

[1] Op. cit., p. 292.

severe or prominent symptoms. In some cases a muco-sanguineous discharge, more or less profuse, may be all that engages the patient's attention; but sooner or later a dull aching and fixed pain in the sacral region, violent tenesmus, weight and bearing down, especially after defecation, severe shooting, and lancinating pains extending to the loins, hips, and down the thighs, are experienced. The stools are passed with difficulty and pain, are scanty and frequent, and attended with bleeding or a puriform sanies, which is often excessively fetid. In fungoid disease considerable hemorrhage occurs from time to time: in most instances the stools are compressed and figured, or passed in small pellets, as in simple stricture, or diarrhœa may be present.

Fistula in ano frequently exists with cancer, as also do hæmorrhoidal tumors, and are either coincident, or a result of impeded circulation, giving rise to suppuration in the one instance, and to a morbid growth of tissues in the other. The whole of the digestive organs become deranged, causing flatulent distension of the stomach and intestines, and acute pains in the abdomen; as the disease advances, hiccough, eructations, nausea, and vomiting are present; the appetite fails, emaciation and loss of strength ensue, the countenance assumes the peculiar leaden hue indicative of malignant disease, anasarca and hectic supervene, and under continuous suffering the vital powers succumb. Sometimes obstruction takes place, and the patient dies with the symptoms of internal strangulation; or ulceration having extended up the bowel, rupture takes place during an expulsive effort, and fatal peritonitis occurs. This happened to Dr. ——, an eminent physician residing in Lincolnshire, who sent for me in July, 1859, the day before he died. His bowels had not been moved for eight days previously to my seeing him; I passed a small O'Beirne's tube and injected some thin warm gruel, which had the effect of bringing away large quantities of fecal matter; this was repeated several times. I left him on the following morning to return to town; subsequently he had several free evacuations; late in the afternoon, while at the closet, he suddenly exclaimed, "Something has given way;" great abdominal pain ensued, which continued, in spite of all that was done, till he died.

It is essential to bear in mind the various complications that cancer of the rectum gives rise to, either from sympathy, from

impeded circulation, or from the extension of the disease and implication of other organs. Thus from contiguity or implication severe vesical irritation is induced, and the patient is tormented by a constant desire to micturate; in the female the uterus and vagina are frequently affected. This was the case in a young lady I saw in consultation with Dr. Barnes; she had cancer of the anterior and left walls of the rectum, which were extensively ulcerated; the cancer also affected the posterior wall of the vagina, the mucous membrane of which was not ulcerated, yet she complained of more pain in this part than in the rectum; and I saw a similar case in consultation with Dr. Ridsdale.

In the commencement, unless the disease is within reach of the finger, and occurs as hardened tubercles or irregular fungoid growths, the diagnosis of the disease is not easy, and requires a close and accurate consideration of all the symptoms, and a familiarity with the various phases and phenomena of malignant disease, to arrive at a just conception; but in the advanced stage the excessively severe shooting pain, the fetid puriform discharge, the rapid progress of the affection, and the peculiar unhealthy aspect of the countenance, lead to a correct conclusion. Yet the latter appearance is not invariably present, as was illustrated in a man aged fifty, who applied at the Blenheim Dispensary, in 1852, affected with fungoid disease, the masses of which nearly filled the pelvis; his countenance remained clear, and his general health was not much disturbed for a considerable time; he lost blood at stool, and a copious hemorrhage followed any examination, even when conducted with the greatest care and gentleness.

In the treatment of this disease all our efforts will be unavailing in effecting a cure; but by well-directed means we shall be able to mitigate the sufferings, and even to prolong existence. Narcotics are the remedies chiefly to be relied on to afford ease from pain; they must be administered by the mouth and by the rectum. It will be desirable, in most instances, to confine the patient to a couch, as walking, or even the upright position, will aggravate all the symptoms, in consequence of the vessels of the rectum becoming congested by the gravitation of blood. Great attention must be paid to diet, which should be nutritious, light, and easy of digestion; all stimulating and heating articles of

food being strictly forbidden. The bowels must be kept open by small doses of castor or olive oil, and, after each dejection, emollient and anodyne enemata must be used. Suppositories of hyoscyamus and conium, separately or conjoined, with or without the addition of camphor; also opium and its various preparations will be required to allay the distressing pain. The warm hip-bath, by its soothing effects, will be a useful adjunct in the treatment, and as it produces no fatigue to the patient, may be used at all periods of the disease. Irritation is to be allayed by injections of warm oil, lime-water and oil, and decoction of marshmallows with opium. If there is acrid and fetid discharge, emollient and mucilaginous enemata well diluted, solutions of Condy's permanganate of potash, chloride of zinc, Peruvian balsam, creasote, &c., must be used. According to the patient's condition, we may prescribe the various preparations of iron, or vegetable tonics, with alkalies: arsenic is sometimes prescribed for cancerous diseases of other parts, but its usefulness in this or similar cases may be questioned. Morphia and other preparations of opium become indispensable, as the disease advances, to assuage the pain and procure sleep. The tolerance of this drug by the system, when affected with cancer, is extraordinary; doses will be required to procure ease, which, under other circumstances, would prove fatal to half a dozen individuals. A lady I attended with carcinoma, which went on to ulceration, took eight grains of morphia in twenty-four hours, besides using narcotic suppositories and enemata; and, notwithstanding these large doses, her sufferings were most acute: her case was one of the most distressing that could be witnessed; she ultimately sank exhausted by pain and constitutional irritation. In fungoid disease, the hemorrhage at times is very profuse: an endeavor to arrest it must be made by the application to the sacrum of bladders containing pounded ice, the injection of iced water, enemata containing mineral and vegetable astringents, as the preparations of lead, zinc, copper, alum, tannic acid, infusion of matico, &c.

Lisfranc proposed excision of the rectum, when affected with carcinomatous disease, and he has performed the operation several times: other surgeons have also had recourse to the same proceeding, but the results are by no means favorable. In the greater

number of cases the disease returned within a short period in an aggravated form; and it is questionable whether those reported to have been cured were not instances of simple induration, and not true cancer. I have never seen the rectum removed, and should be very unwilling to undertake the operation, from a conviction that I should not be rendering benefit to the patient in the slightest degree; and in saying this, I believe I utter the sentiments of the majority of British surgeons.

The annexed engraving illustrates the pathological changes induced by cancer. The calibre of the rectum is reduced by contraction and the projection inwards of cancerous nodules: above its most constricted part the mucous membrane is extensively ulcerated; a fistulous opening—through which a probe is passed—communicated with an abscess in the pelvic cavity, which also opened externally above the crest of the ilium. The sacral bones were implicated in the disease.

CHAPTER XVII.

INJURIES OF THE RECTUM.

THE rectum is wounded intentionally in some surgical operations, as in puncturing the bladder through the trigone vesicale for the relief of retention of urine, when an instrument cannot be passed per urethram; also in the treatment of some forms of stricture, a subject on which Mr. Cock has made some valuable observations in a paper published in the thirty-fifth volume of the *Medico-Chirurgical Transactions*.[1] It is wounded in operating for fistula in ano, but not so extensively as was formerly the custom; and it may be necessary to incise it for the extraction of foreign bodies: the surgeon sometimes accidentally wounds the rectum in performing the operation of lithotomy, but this is seldom the case if the operator depresses the intestine with the fore-finger of the left hand whilst he is making the deeper incisions; he should also introduce the finger into the rectum before he commences, as, by so doing, he will cause the bowel to contract, or should it be loaded with feces he will be made aware of the fact, and will not proceed till he has procured their evacuation. Some years since I saw the rectum of a child cut freely into by an hospital surgeon in consequence of the neglect of these precautionary measures: the feces were forcibly ejected through the incision in the perineum, and greatly embarrassed the operator.

The rectum is lacerated in various degrees and directions by external injuries, and from causes acting from within the body, as in parturition, or during the expulsion of bulky and indurated feces. The laceration may involve the whole of the structures or the mucous membrane only, and thus two forms of injury are met with—the complete and the incomplete.

The incomplete form of laceration generally occurs in those

[1] See also Mr. Henry Thompson's "Essay on the Pathology and Treatment of Stricture of the Urethra," pp. 303–309.

who are of constipated habit, and is more frequently produced by the expulsion of a hardened stool than from any other cause. If the rent is the consequence of defecation, it may be either vertical or transverse: when vertical it results from undue distension of the anus during the violent efforts of the expulsive muscles, or from the sphincters, by irritation, being in a preternatural state of contraction, and usually terminates at the line of junction of the skin and mucous membrane: when the laceration is transverse, its situation is above the margin of the internal sphincter, and is the effect of a fold of mucous membrane of the pouch of the rectum falling under a mass of indurated feces at the time of their forcible extrusion, and being dragged down with them is torn from side to side. Those who are liable to this accident are the subjects of constipation, and have the upper part of the rectum relaxed. Complete laceration sometimes ensues from the same cause, though it must be a very rare occurrence. Mr. Mayo[1] relates a case in which he was consulted. The patient, a lady of forty, of constipated habit, was on a journey, and the bowels had not acted for many hours: during a violent effort to relieve them she felt something give way, and on the following morning some feces passed per vaginam. An examination revealed a rent two inches from the anus sufficiently large to admit the end of the finger.

The symptoms of laceration, the consequence of defecation, are a sense of tearing and giving way of the part, attended with pain, which is lessened after a time, but does not entirely subside, and recurs with greater or less severity whenever the patient goes to stool; at the period of the occurrence, the feces are streaked with blood, and with pus as soon as suppuration is established. After the accident the same phenomena occur as in wounds of other parts, inflammation is set up, lymph is effused, the margins of the rent become swollen, granulation and cicatrization follow, or the reparative process failing, the lacerated surface degenerates into an ulcer.

In the treatment of this injury, it is essential to diminish as much as possible the irritation consequent on the action of the bowels, and the exhibition of emollient enemata will best effect

[1] Op. cit., p. 13.

this object; but mild aperients may be exhibited if they be thought advisable; active cathartics must not be had recourse to, or they will be productive of harm, by exciting determination of blood to the rectum, and rendering the evacuations acrid and irritating. The wound must be cleansed after each evacuation, or the lodgment of particles of fecal matter will possibly give rise to agonizing pain and spasm of the sphincter. When the laceration does not readily heal, but remains irritable and painful, nitrate of silver in solution should be applied, or the solid pencil may be passed lightly over the surface. In spite of these means the wound sometimes will not heal, but passes into the condition of an ulcer, in which case it will be necessary to make an incision through it in the manner directed in the Chapter on Fissure of the Rectum.

In the great number of cases, the treatment described, conjoined with the recumbent position and moderate unstimulating diet, will be all that is necessary. However, instances occur in which slight injuries are productive of excessive local inflammation or great constitutional excitement; under these circumstances, in plethoric individuals, it may be necessary to take blood from the system generally, to apply leeches around the anus, or to cup over the sacrum. When the wound is inflamed and painful, a cataplasm of linseed, or bread impregnated with a solution of acetate of lead and infusion of tobacco or laudanum, must be applied to the anus.

M. K—— consulted me under the following circumstances: the day previously, while passing an indurated motion, she suddenly felt great pain and a sensation of tearing of the anus; she also noticed signs of blood: the pain decreased, and she remained tolerably easy till she went to stool the following morning, when it returned with great severity, which induced her to seek medical assistance. On examination, I perceived a slight fissure at the margin of the anus, and found it involved the mucous membrane for about an inch. I ordered her to have an ounce of castor oil, and to wash out the rectum with an enema of warm water: there being tenderness on pressure around the external portion of the laceration, a poultice was directed: these means afforded relief: however, the laceration did not heal, it became irritable, and defecation was followed by considerable pain: after eight days I applied the nitrate of silver, and repeated it two or three times at intervals of two days, and a cure was shortly effected.

T. M—— applied to me in consequence of experiencing pain at stool, with purulent discharge from the anus. The history of the case was, that some weeks previously, while straining violently at the closet, he felt "something give way at the end of the bowel," and blood flowed afterwards. He had previously been very costive: to lessen the pain subsequently produced by a hard stool, he took castor oil at frequent intervals up to the time of his seeing me. I introduced my finger into the bowel, and felt at the upper margin of the sphincter a fold of the mucous membrane that had been torn from above, where a depression with a pulpy surface then existed; the torn membrane was tumid and indurated. He was ordered an ounce and a half of castor oil, to be taken early in the morning, and an enema of warm gruel after the oil had acted: by these means the bowels having been thoroughly unloaded, I then carried an incision through the centre of the ulcer and lacerated membrane. He was directed to observe the horizontal position, and was restricted to a farinaceous diet. An emollient enema was given on the third day, and ordered to be repeated every second day; ablution with tepid water and soap to be used night and morning: by these means recovery soon took place.

An accident, commonly designated laceration of the rectum, occurs during parturition, but it is, in truth, rupture of the sphincter only. However, it now and then happens the intestine is also torn. The circumstances producing this injury appertain either to the child or to the mother. Those which belong to the child are the large size and solidity of the head; to its malposition, whereby is presented a longer diameter than usual to the external outlet; to malpresentations, as in breech and footling cases, which do not receive the proper direction so readily as the head; and face presentations, involving the passage of the head in its longest diameter when passing over the perineum.

The causes appertaining to the mother, are her position, as when the lumbar vertebræ are curved forward, and the child's head thereby directed downward and backward on the rectum and perineum: the same occurs if the promontory of the sacrum projects much anteriorly, or if the sacrum be but little curved forward; and, lastly, the perineum may be preternaturally broad, and materially diminish the capacity of the lower outlet.

Sometimes the recto-vaginal septum is torn along with the posterior part of the perineum, and the child passes per anum. The history of a case in which this accident occurred is given by

Dr. Andrews, of Steubenville, Ohio, in the *Philadelphia Examiner*, for March, 1839: the bowels were kept constipated during a number of days, and recovery took place. Another case is mentioned in the *Dublin Journal*, of a child born per anum, with laceration of the perineum for two-thirds of its extent: the rent suppurated, gradually closed up, and the woman made a complete recovery.

The rectum may be lacerated by want of due caution on the part of the medical attendant, either by not supporting the perineum, or by some awkwardness in cases of preternatural presentations: the improper and unskilful application of obstetric instruments may also induce the lesion we are now considering.

In rupture of the recto-vaginal septum the condition of the patient is truly pitiable; she is unable to retain her feces, and is rendered miserable to herself and offensive to those about her.

In laceration resulting from parturition, no immediate operative interference is advisable, as any attempt to obtain union of the torn parts will be frustrated by their condition, and the irritation produced by the lochial discharge; but we may very materially mitigate the patient's discomfort by the exhibition of emollient enemata, by washing out the vagina with warm water, and by drawing off the urine with a catheter, to prevent its coming in contact with the wound, and producing irritation. The patient must be directed to lie on her side with the knees slightly flexed. The slighter cases of laceration will sometimes heal under this treatment alone, but the more severe will not do so, and after the lochia cease, and active inflammation in the part subsides, we must endeavor to restore the continuity of the part. The patient's health having been brought into as good a condition as possible by medical treatment, and the intestines being thoroughly freed from fecal accumulations, the edges of the tear must be made raw: for this purpose a small scalpel is the best instrument; some use the scissors; a wooden gorget is to be passed into the rectum, to support the parts while the margins are being pared with the knife; the edges are then to be brought into apposition, and secured by sutures, which are to be tied in the vagina: the number and kind of suture employed must depend on the nature of the case and judgment of

the surgeon; the twisted suture is better for securing the perineal edges, and the pin most applicable is that used by Dr. Bushe.

The rectum is torn by a number of accidents, with or without injury to surrounding external parts. I attended, in conjunction with another surgeon, a woman who received a kick from a cow she was milking at the time; a lacerated wound was produced, extending through the labium of the right side across the perineum into the rectum; an artery in the labium was pouring out a jet of blood when we saw her. A ligature was applied to the bleeding vessel, and two points of interrupted suture were inserted; a fold of wet lint was kept to the part; she was confined to the bed, great attention paid to cleanliness, and the bowels were kept easy by enemata: the diet was spare. The wound suppurated, and completely healed by granulation. Dr. Bushe[1] mentions having seen a case of perforation of the recto-vaginal septum by the end of an umbrella, on which the patient was in the act of sitting. In St. George's Hospital Museum is a preparation from a man who fell off a table, and the leg of a chair that he upset in falling, passed up the rectum, penetrated its walls, and entered the bladder. There was very slight external injury. He was in a state of collapse when admitted, and he sunk in about twenty-one hours.

By awkward attempts, and the application of too much force in endeavoring to pass a bougie up the rectum, its tunics have been torn or perforated. By ignorant and clumsy nurses, enema pipes have been thrust through the rectum and peritoneum, and the fluid injected into the abdominal cavity. In the museum of St. Bartholomew's Hospital[2] is a preparation from the body of a patient whose death was occasioned by the perforation of the rectum by a metallic clyster-pipe, and the injection of a pint of gruel into the peritoneal cavity. In the same museum are two other preparations[3] of the rectum, uterus, and vagina, and the large intestine of a child. Ten months before her death, in an endeavor to administer an enema, a clyster-pipe was forced through the adjacent walls of the rectum and vagina. At the part thus injured there is a small depression in the wall of the

[1] Op. cit., p. 80.
[2] Sixteenth Series, No. 36.
[3] Sixteenth Series, Nos. 93, 94.

vagina, and a long, pale, and irregular cicatrix in that of the rectum. Near the cicatrix, also, there are traces of small healed ulcers of the mucous membrane of the rectum. Just below the cicatrix, at the distance of about an inch from the margin of the anus, the canal of the rectum is reduced to an eighth of an inch in diameter, and the adjacent tunics are indurated. Above this structure the intestine is greatly dilated, and contained a large bucketful of fluid fecal matter.

The rectum is sometimes perforated by unskilful attempts to introduce a catheter into the bladder. In the summer of 1852, I was sent to see an Irishman who had retention of urine: the bladder was greatly distended, and reached nearly to the umbilicus: forcible attempts had been made to relieve it, and the catheter made to enter the penis till the rings were brought into contact with the glans, but no urine flowed. I discovered the point of the instrument had been thrust through the urethra immediately anterior to the prostate, and had passed into the rectum. By keeping my finger in the bowel, I succeeded without much difficulty in passing an instrument of moderate size into the bladder, and to prevent any mischief, I ordered it to be retained for a day or two: within ten days I was able to pass a full-sized catheter, and the man did very well.

CHAPTER XVIII.

FOREIGN BODIES IN THE RECTUM.

We may be called upon to remove, by mechanical means, various substances from the rectum, either in consequence of their obstructing this outlet, producing inflammation, or interfering with the integrity of the intestine.

These substances may be divided into two classes, one being formed in the body, the other being introduced from without. To the first class belong biliary, intestinal, and fecal concretions; while the second will include a long list of heterogeneous substances which have been swallowed, either accidentally or intentionally, or introduced into the rectum through the anus by the individuals themselves with a view to obviate costiveness, from a morbid state of the imagination, or by accident, or they may have been introduced by other persons from feelings of mischief or revenge. Those swallowed either by accident or intentionally, in consequence of a perverted condition of the mind, include portions of bones, the bones of fish and small birds, the stones of fruit, coins, knives, pins, needles, nails, sealing-wax, brown paper, cedar pencils, &c.; and among the variety of substances that have been introduced through the anus, according to the testimony of accredited authors, may be mentioned, bottles, pots, cups, a knitting-sheath, a shuttle with its roll of yarn, a pig's tail, ferrules, rings, pieces of wood, ivory, metal, horn, cork, bone, &c.

Foreign bodies that have been swallowed do not usually occasion much inconvenience in their passage through the intestinal canal, though it is sometimes marked by considerable irritation. Should the substance not be discharged with the feces, but become entangled in the rectum, it will give rise to inflammation accompanied by tenesmus, violent straining, and perhaps prolapsus; by perforation of the tissues of the intestine it will lead to the formation of abscess and fistula; or partial or total obstruction may

be produced followed by enteritis or peritonitis; these effects will be greatly influenced by the size, form, shape, and nature of the substance. When intestinal or fecal concretions are the cause, the symptoms are gradual in their accession, and are preceded by signs of derangement of the stomach, liver, and bowels; at first, the local disturbance is marked by a feeling of weight, distension, and pain in the rectum, followed by obstinate constipation, great straining to relieve the bowels, attended with more or less prolapsus of the mucous membrane and congestion of its vessels; and if the patient be not relieved, enteritis, peritonitis, and death will ensue. When the foreign substance has been introduced through the anus, the symptoms are more rapid in their development, and if the bowel has been at the same time injured, they will be more or less serious in their character in proportion to the extent and nature of the lesion.

It is seldom that we can gain any information from the patient when the substance has been swallowed, as it often happens that he is unconscious of the circumstance; but if it has passed into the rectum from without, the patient may then be able to make us acquainted with its nature and the manner of its introduction, unless he be of unsound mind, or was insensible at the time of the occurrence.

For extracting the various foreign substances it may be our duty to remove, instruments of different sizes and shapes, and effecting different objects, will be required, much depending on the form of the body to be extracted, and the material of which it is composed, and on the ingenuity and tact of the surgeon. Should the substance be a bottle, or a jar of glass, or earthenware, it will be a good plan to insert slips of thin ivory, wood, or gutta-percha, between it and the bowel, and thus form a tube around it which would greatly facilitate its extraction, and protect the intestine from injury, in case the bottle or jar should be broken. The anus being very dilatable, it will be rarely necessary to divide the sphincters, unless the foreign body be sharp and angular, and has penetrated the intestine, in which case an incision on one or both sides may be required.

The position of the patient should be on the side, with the knees drawn up towards the chin, and the buttocks projecting over the edge of the bed or couch, or, if deemed more convenient,

he may be placed in the same position as for the operation of lithotomy.

Some years since I removed an ivory tube from the rectum of a woman, who was under my care, suffering from dyspepsia and torpor of the bowels, to which she had been subject for a considerable time. The rectum being in a relaxed condition, besides prescribing medicines to be taken by the mouth, I had directed her to inject a slightly astringent enema morning and evening; the apparatus she used for the purpose consisted of a pig's bladder, into the neck of which was tied a smooth ivory jet, and on this occasion, while using it, the tube was forced from it into the rectum; she immediately sent for me, and I saw her within half an hour of the accident; on making an examination, the tube was felt immediately above the margin of the internal sphincter; it was extracted without difficulty, a pair of œsophagus forceps being used for the purpose.

Three years since, a physician was suddenly seized, while walking, with severe irritation and pain at the anus: on his return home he bathed himself with hot water, but it failed in affording any relief; the finger being introduced within the anus, a portion of bone was felt and removed; it was a piece of mutton bone, with very sharp angular corners, and had it not been extracted thus early, doubtless, it would have perforated the intestine.

In the early part of 1856, I received an urgent request from a professional friend to visit him immediately, he being suddenly seized with a severe and sharp pain at the fundament. When I saw him, he was lying on a sofa, and was afraid to move, as the least motion produced the sensation of something running into him. On making an examination, the sphincter was found contracted; the finger introduced into the bowel came in contact with a fish-bone, one end of which had perforated the intestine about a quarter of an inch above the anal margin. With a pair of polypus forceps I grasped its upper extremity, and pushing them upwards, drew the bone out of the tissues; then, with the point of it resting on the index finger of the left hand, I removed it without difficulty or causing any pain. No evil consequences followed.

We shall more often be called upon to remove from the rectum

intestinal and alvine concretions than any other substances; I have had on several occasions to free the bowel of accumulated and indurated feces. These cases occur mostly in females, and depend on the greater capacity of the pelvis permitting of accumulation, combined with the very general habit in them of postponing the calls of nature: when it occurs in men, they are generally advanced in years, or are the subjects of paralysis. A lithotomy scoop is the best and most convenient instrument for our purpose; but if that be not at hand, the handle of a tablespoon is a very good substitute: with either of these, and the forefinger of the other hand, there will be no difficulty in effecting the object. After we have emptied the bowel as far as we can reach, enemata of warm soap and water, or olive oil, with decoction of barley, should be injected into the bowel by a long elastic tube, as often as may be deemed necessary, so as to entirely free the intestines; after which cold water, or slightly-astringent enemata, must be used to restore the tone of the bowel lost by the distension to which it had been subjected.

Mr. Lacy,[1] of Poole, in May, 1853, removed piecemeal from the rectum of a lady a concretion "at least fifteen inches in circumference." The outer part of it consisted of concentric layers of what looked like red sandstone, and which proved, on examination, to be a compound of iron and magnesia. The interior was a softer mixture of the earthy and ferruginous matters, with many thousands of strawberry and other seeds.

Mr. Jones,[2] of Llandyssul, removed three concretions from the rectum of a farmer; two of them were as large as a man's fist. "The concretions consisted of layers of a substance of a brownish color, and harder than leather, each of them containing a plumstone for a nucleus."

Sometimes ascarides nestle in the rectum in such numbers that they require to be removed manually, which is to be effected in the same manner as fecal collections; but we cannot thereby remove the whole, and as they rapidly increase if any remain, additional means must be had recourse to: our end may be effectually accomplished by injecting from two to eight ounces,

[1] "Pathological Transactions," vol. vi. p. 203.

[2] "Lancet," Sept. 6, 1856, p. 278.

according to the age of the patient, of infusion of quassia; or olive oil, or turpentine in gruel, may be used; a dose of jalap, calomel, and aromatic powder should be prescribed to be taken early in the morning, and by these means the bowels will be thoroughly cleared. An important point, and one frequently overlooked in these cases, is to remove the debility of the intestines that always exists and favors the development of these entozoa: the bitter infusions and mineral acids are the best medicines for this purpose; they will prevent the great secretion of mucus which forms the nidus of these parasitical creatures: the bowels must at the same time be kept regular by purgatives.

The subjoined are some of the curious and interesting cases of foreign bodies in the rectum which are on record:—

Nolet,[1] surgeon to the Marine Hospital at Brest, relates the case of a monk, who, in order to cure himself of a violent colic, introduced into the rectum a bottle of Hungary wine, having previously made a hole through the cork to permit the fluid to flow into the intestine. In his desire to accomplish his object, he pushed the bottle so far that it completely entered the gut. Various means were tried to remove it without effecting the object; at last, a boy, between eight and nine years of age, succeeded in introducing his hand into the bowel, and withdrew the bottle.

Tuffell, in 1813, removed a flask of crystal from the rectum, but was obliged to break it before he could accomplish its removal.

Dessault, in endeavoring to remove a porcelain jelly pot, of conical form, and about three inches in length, fractured it in several pieces; however, he succeeded in removing them without injuring the intestine.

Buzzani,[2] in the year 1777, at Turin, extracted from the rectum of a man a teacup, which the patient had himself introduced for the purpose of dilating the bowel.

Morand[3] records the two following cases: A man, about sixty years of age, presented himself at the Hôpital de Charité, complaining that the pipe of a syringe had entered his rectum. Gerard introduced his finger, and felt a foreign body, which he

[1] "Observations curieuses sur des Phénomènes Extraordinaires qui regardent particulièrement la Médecine et la Chirurgie." Obs. xxxiii. p. 103.

[2] "Lancet," 1855–6, p. 23.

[3] "Mém. de l'Acad. Roy. de Chirur.," Paris, 1700.

removed with a pair of lithotomy forceps. It proved to be a large knitting-sheath of boxwood, six inches in length. A weaver, who had long suffered from constipation, having some vague notions of the efficacy of suppositories, introduced into his rectum a shuttle with its roll of yarn. After five days he applied at the Hôtel Dieu. M. Bonhomme extracted it with a pair of lithotomy forceps.

The two following cases are related by Hevin.[1] M. Quesnay pushed a bone, which was arrested in the œsophagus, into the stomach. It was afterwards arrested in the rectum, and induced great pain. The patient again applied to M. Quesnay, who found the bone sticking obliquely across the intestine, with the lower end fixed in its walls. He removed it with a pair of forceps, first disengaging its inferior extremity by pushing it upward. Fagèt removed a mutton bone from the rectum of a man he was called to see: the bone had been swallowed eight days previously.

Méeckren[2] mentions a case in which the jawbone of a turbot was arrested in the rectum. The patient attributed the local and constitutional symptoms he experienced to hæmorrhoids. The true cause was not discovered till, in attempting to administer a lavement, the pipe of the instrument came in contact with a foreign body. Méeckren made an examination, and detected the bone with its ends fixed in the walls of the intestine; he removed it with his fingers. The patient recollected having swallowed it eight days previously, and experienced great pain in its passage through the intestine. Méeckren also mentions a case which occurred to Tholuix, in which the jawbone of a fish became arrested in the rectum. It was cut across with a pair of strong scissors, and the two portions extracted with ease.

Thiandière[3] details the case of a man, aged twenty-two, who, with the view to overcome costiveness, introduced a forked stick into the rectum. This stick was five inches long; one prong was an inch and a half longer than the other, and they were separated to the extent of two inches, each prong being about four lines in diameter, and the stem formed by their union half an inch. He inserted the one stem first, and when the short

[1] Op. cit., tome iii.

[2] "Obs. Med.-Chirurg."

[3] Bullet. Gén. de Thérapeut., Janvr. 1835.

prong had entered the bowel, he endeavored, by dragging on the long one, to force out the indurated feces. In this ingenious essay it is unnecessary to say he failed completely: the pain being very severe, he ceased his manipulations, and finding it impossible to withdraw the fork, he forced the long prong completely within the anus, with the extraordinary idea that it would be consumed with the food. Fearful to divulge the nature of his case, he bore his sufferings in solitude and despair, until the abdominal pain and difficulty in urinating led him to seek the aid of Thiandière, who, on making an examination, soon discovered the foreign body, but it was so high up that he could scarcely touch it. He endeavored, but in vain, to extract it with a forceps passed through a speculum. The happy idea then struck him of using his hand, which, after having washed out the rectum, he insinuated finger by finger. Conducted by the long branch, he succeeded in reaching the bifurcation of the stick, and disengaged it with difficulty from a fold of the mucous membrane in which it had become entangled, then compressing the prongs together he safely removed it.

A similar case to the foregoing is recorded in the *Lancet*.[1] A man, twenty-nine years of age, had suffered from his childhood from prolapsus recti, and was in the habit of replacing the intestine without aid. On one occasion, when the rectum was prolapsed, he cut a branch of willow, which divided into two prongs; holding these in his hand, with the other end of the stick he pushed up the gut, but using too much force the whole of the stick passed up also. The prongs expanding rendered him unable to withdraw it. After eight days, he was seized with acute pain in the breast, which he ascribed to the presence of the foreign body in the rectum. An examination was made per anum, but nothing detected: two months afterwards, abscesses formed over the gluteous muscle, which were opened, and the bifurcated ends of the stick protruded; they were seized, and broken at their angle of junction, and the pieces extracted. Each prong was nine inches in length, and the conjoined stem two inches long and three-quarters of an inch in diameter.

Marchetti[2] mentions the following case: Some students of

[1] Vol. ii., 1835–6, p. 23. [2] "Obs. Med. Rarior Syllog.," cap. vii.

Goettingen introduced into the rectum of an unfortunate woman all, save the small extremity, of a pig's tail, from which they had cut enough of the bristles to render it as rough as possible. Various attempts were made to extract it, but in vain. Marchetti being consulted, adopted a very simple and ingenious procedure, which consisted in securing its inferior extremity with a strong waxed thread, and slipping over it into the rectum a canula prepared for that purpose. He thus defended the bowel from the effects of the bristles, and easily removed it.

Custance mentions the case of a man who fell on an inverted blacking-pot, and had the whole of it forced up the rectum. Attempts were made for an hour and a half to dilate the sphincter, and remove it with a forceps, but in vain. The small end of an iron pestle was then introduced, till it touched the bottom, and, being held there firmly, was struck with a flat iron. At the second blow the pot was broken into several pieces, which were removed piece by piece by the forceps, or the fingers. Next morning he labored under severe intestinal inflammation, with incessant vomiting and excruciating pain over the whole belly; he died at night. The pot was two inches and three-eighths in diameter at the brim, an inch and a half at its base, and two inches and an eighth in depth.

In the first volume of the *Medico-Chirurgical Transactions*, Mr. Thomas relates the following case: "A gentleman, of an inactive and sedentary disposition, had for many years suffered from constipated bowels, which increased to that degree that the most active cathartics failed in producing the desired effect. By the advice of a practitioner, whom he consulted in Paris, he daily introduced into the rectum a piece of flexible cane (about a finger's thickness), where it was allowed to remain until the desire to evacuate the feces came on. This plan succeeded so well that for more than a twelvemonth he never had occasion to resort to any other means. One morning, being anxious to fulfil a particular engagement in good time, in his hurry he passed the stick farther up, and with less caution than usual, when it was suddenly sucked up into the body, beyond the reach of his fingers. This accident did not interrupt the free discharge of the feces, and the same evacuation regularly took place every day, whilst the stick remained in the gut. It was seven days afterwards when I

first saw him; he was in a very distressed state, with every symptom of fever, tension of the abdomen, and a countenance expressive of the greatest anxiety. His relatives and friends were totally ignorant of the real nature of the case; and nothing less than the urgency of his sufferings could ever have prevailed upon him to disclose it to me. Such were his feelings on the occasion, that a violent hysteric fit was brought on by the mere recital of what he termed his folly.

"Upon examination no part of the cane could be discovered; but one end of it was readily felt projecting, as it were, through the parietes of the abdomen, midway between the ilium and the umbilicus on the left side. The slightest pressure upon this part gave him exquisite pain. After repeated trials, I was at length enabled, with a bougie, to feel one extremity of the stick lodged high up in the rectum; but without being able to lay hold of it with the stone forceps. To allay the irritation for the present, an emollient clyster, with tinct. opii, ʒij, was given, which passed without the least impediment, and did not return. On the next examination, two hours after, I found the sphincter ani considerably dilated, and, by the continued perseverance to increase it, the relaxation became so complete that in about twenty minutes I was enabled to introduce one finger after the other, until the whole hand was engaged in the rectum. I found the bottom of the stick jammed in the hollow of the sacrum, but, by bending the body forward, it was readily disengaged and extracted. Its length was nine inches and a half, with one extremity very ragged and uneven.

"For several days after the situation of the patient was highly critical, the local injury, joined to the perturbation of his mind, brought on symptoms truly alarming. At length I had the satisfaction of witnessing his complete recovery; and he has ever since, more than two years, enjoyed good health, and the regular action of the bowels, without the assistance of medicine, or any other aid."

A man, æt. seventy-three, was admitted into the St. Marylebone Infirmary. He was delirious, and made his complaints very incoherently. He said there was a stick in his rectum, but no further information could be gained from him. He was seen by Mr. B. Phillips, who suggested that the sensation of something

in the rectum might be caused by the enlarged prostate, and that in his delirious condition the sensation of a foreign body was sufficient to impress upon his mind the idea that it was a stick. He died the day after his admission; and upon a post-mortem examination being made, a stick rounded at each end was found; its superior extremity had penetrated through the sigmoid flexure of the colon into the peritoneal cavity.[1]

In the thirtieth volume of the *Medical Gazette*[2] is an account of a Greenwich pensioner, who was admitted into the infirmary on the 20th of October, 1814, having eight days previously introduced a large plug of wood into the rectum for the purpose of stopping a diarrhœa. It was with great difficulty extracted by Mr. M'Laughlan, surgeon to Greenwich Hospital.

In June, 1842, a man, æt. sixty, was brought to King's College Hospital, laboring under obstruction of the bowels, which he attributed to having eaten a large quantity of peas six days previously. He expired while being carried in a chair up to the ward.

On examining the body after death upwards of a pint of gray peas was found in the rectum: they had been swallowed without mastication, and had undergone no alteration in passing through the alimentary canal, except becoming swollen by warmth and the absorption of moisture. The urethra was pressed upon, and he had had retention of urine for four days. The bladder was enormously distended, its apex reaching the umbilicus, and its base nearly filling the brim of the pelvis.[3]

Mr. Liston[4] removed from the rectum half a jaw-bone of a rabbit, which had been swallowed in a plate of curry.

Mr. Lawrence had a case in which a man had broken the neck of a wine-bottle into his rectum; he gradually dilated the sphincter, introduced his whole hand, and removed it.

Mr. Fergusson[5] removed a bougie from the rectum of an old gentleman who was in the habit of using such an instrument; on

[1] "Medical Gazette," vol. xxix. p. 846.

[2] Pp. 461, 462.

[3] "Medical Gazette," vol. xxx., pp. 605, 606.

[4] "Practical Surgery," by Robert Liston, Fourth Edition, 1846, p. 431.

[5] "Practical Surgery," Third Edition, p. 750.

one occasion he passed the bougie within the sphincter and could not withdraw it. Several unsuccessful attempts had been made to remove it, previous to Mr. Fergusson seeing the patient; with some difficulty he succeeded in seizing the end with a pair of lithotomy forceps, and withdrawing it. The bougie was nine inches in length, and an inch in diameter.

CHAPTER XIX.

MALFORMATIONS OF THE RECTUM AND ANUS.

MALFORMATIONS and congenital deficiencies of the intestinal canal and its terminal aperture, occasioning entire obstruction or admitting of but a very partial evacuation of its contents, demand the especial attention of the surgeon, from the necessity of prompt interference, and the certainty of a fatal issue unless the defect is remedied, by establishing a free outlet for the meconium and excrementitious matter of the alimentary organs. The accomplishment of this object is thought by many who have not had to treat such cases, a very easy and simple matter; but to the practical surgeon various difficulties present themselves. The diagnosis, when the case is not one of occlusion of the anus by merely a thin membrane, is attended with doubt, as the symptoms and physical signs do not in the majority of cases afford a definite clue as to how much of the intestine is deficient, or as to the relative position of its termination to the external surface; consequently an attempt to reach it by cutting instruments is attended with much uncertainty. Moreover, supposing an operation to have been performed, and an opening into the bowel made, this is only the beginning of the surgeon's anxiety and trouble, for the proneness to contraction in the artificial aperture is so great, that it is only by the most constant attention for weeks, months, or even years, that it can be maintained. In many of the recorded cases, an operation has been performed several times, in order to re-establish the opening; in October, 1856, I was requested to operate on a child fifteen weeks old, that had been operated on twice previously; the case will be again referred to under the proper section of this chapter. The result of the majority of published cases is by no means encouraging; and if the history of others were known, there is reason to believe the view presented would be still less so. But for my own experience, I think failure

of success in the majority of cases ensued on the operation being delayed too long, or the opening when made being too small, or from not maintaining it patent. Discouraging as are the results presented to us, yet we must not be deterred; for as the infant must invariably perish unless relieved by art, it behooves the surgeon to make an effort to preserve the life of the child, if the nature of the case can be so far made out as to offer a probability of success.

CONTRACTION AND OCCLUSION OF THE ANUS.

The anal aperture is sometimes preternaturally small, either in consequence of a contraction in the extremity of the rectum, or from the skin extending over the border of the sphincter. The opening may be only sufficiently large to allow the more fluid part of the meconium to drain away, or the size of the orifice may be such as to cause a difficulty in passing, but not entirely preventing, the escape of excrementitious matters.

When the anus is merely contracted it must be dilated by tents and bougies. If an extension of the skin beyond the margin of the sphincter abridges the anal opening, several slight notches may be made in it with a blunt-pointed knife, and afterwards it may be dilated by the pressure of bougies.

Sometimes two anal apertures exist more or less distant from each other: the one may also be larger than the other, and give exit to the greater part of the contents of the bowels. If the two opening are close together, and not large, it will be advisable to divide the septum between them; but if any great thickness of tissue intervenes it will be better to enlarge that opening which corresponds most nearly to the position of the natural outlet, and to procure the closure of the other: to accomplish the one object, it will be necessary to have recourse to dilatation by pressure and incision, and when this has been effected, the other may be brought about by the application of strong nitric acid, nitrate of silver, or the actual cautery.

In other cases total occlusion of the anus exists, an anomalous condition much more common than either of the preceding forms of malformation. The structure closing the anus is not generally a continuation of the integument, but a lamina of fibro-cellular

tissue. It is usually thin and transparent, permitting the meconium to be seen through it, and forming a small roundish prominence, which is most distinct when the child cries or strains. This bulging membrane communicates to the finger a doughy feel, and sense of obscure fluctuation; by pressure it is made to recede, but it reappears immediately the finger is taken away. In some rare cases the membrane is very thick and dense, especially at the circumference; the protrusion will then be less prominent, and the meconium will not be distinctly felt or seen.

This form of malformation will probably be discovered before any symptoms of obstruction arise; but if by carelessness it is overlooked, some days may elapse ere the child betrays any evidence of inconvenience or suffering: but sooner or later it will be observed to cry violently, to strain much, and although at first it may have taken the breast readily, and retained the milk, sickness sets in, and if no relief be afforded, the infant perishes with all the symptoms resembling those arising from strangulated hernia. When the membrane is thin, and the nature of the case evident, no delay in making an opening should take place; but if the membrane be thick, and a doubt exist as to the continuation of the rectum, the operation may be delayed for twenty-four or forty-eight hours, no mischief being likely to occur in that time; and during this period the intestine will become distended, and the condition of the parts be more clearly revealed.

The operation necessary to remedy this condition is very simple, and consists of making a crucial incision through the occluding membrane with a bistoury, removing the intervening flaps with a pair of scissors, and, as is generally required, dilating the opening by the occasional introduction of bougies. I was called to see a child of a poor woman living in the neighborhood of University College Hospital, that had the anus imperforate. It had been born about eighteen hours; the membrane closing the anus was thin, and rendered prominent by the contents of the intestine. With a lancet, two incisions were made crossing each other, and the intervening angular flaps removed: a tent was introduced at first, but no contraction ensuing, its use was very soon discontinued, and the infant progressed satisfactorily. Among the recorded cases are the following: Dr. Thomas Coch-

rane,[1] in April, 1780, was sent for to see a child of a soldier of the 55th regiment; it had been born eighteen hours previously, but no evacuation had taken place from the bowels. The abdomen was much distended, and a swelling, the size of a hen's egg, projected from the fundament; this being punctured, a large quantity of meconium and gas escaped. The child did well.

Mr. A. Copland Hutchinson[2] had a male child brought to him with imperforate anus. The child was one day old, and when it strained, a bulging of the intestine was very perceptible. An incision was made through the occluding structures, and the aperture maintained by the introduction of dossils of lint dipped in oil. After three weeks no further treatment was required.

IMPERFORATE RECTUM.

The anus in some cases is well formed, and the bowel is continuous, but the meconium is retained by a membranous partition, which may be just within the anus, or an inch or more above it; as in imperforate anus, the membrane varies in thickness, but is usually thin; the nature of the case is made manifest by the retention of the meconium, and by digital examination, or by using a probe or a small elastic catheter or bougie. Dr. Bushe[3] mentions having seen, in the dissecting-room, a child in whom two partitions across the rectum existed, the one was half an inch from the anus, the other three-quarters of an inch above that.

In imperforate rectum the obstructing membrane must be incised by a narrow bistoury, carried up on the finger, or by a pharyngotamus, and bougies afterwards employed. When the membrane is thick, we may not be able to tell whether the intestine is continuous above till we have made the incision; but if it be thin, it will bulge down upon the finger, and convey the like sensation as when the anus is closed by a membrane. After establishing an opening in the occluded gut, it is most necessary that as the child grows it should be fully dilated. The evil of neglect of this important part of the treatment has been illustrated

[1] "Edinburgh Medical Commentaries," vol. x. pp. 379–80.

[2] "Practical Observations in Surgery," Second Edition, 1826, p. 264.

[3] Op. cit., p. 40.

by several cases that have come under my observation. In 1855, a gentleman came from Australia to place himself under my care with stricture of the rectum from congenital malformation. When he applied to me the opening in the bowel was only sufficiently large to admit number eleven urethral bougie. He was born with imperforate rectum, which had been punctured with a trocar; after he was eleven years old the opening had been sufficiently dilated to admit number four rectum bougie. While in the colony the bougies he had became useless from wear, and being unable to obtain others, contraction in the bowel ensued and caused him much misery for some time previous to his coming to England. He was under my care several months, and the contraction was so rigid that I found the ordinary bougie totally inadequate in dilating it. The plan I adopted was introducing in the stricture a gutta-percha tube, having one end closed, and four slits extending nearly to this extremity; then passing up it a conical wedge and thus expanding the tube. He was ultimately able to pass number twelve bougie; and experiencing none of his former suffering and inconvenience, he returned to Australia. To satisfy his mind that no contraction existed higher up the bowel, I made an exploration with a ball on the end of a slender tube, on which occasion he was put under the influence of chloroform by Mr. Clover.

In 1857, Dr. Hall, of Brighton, requested me to go down and see a child he was attending: she was about nine years old, and suffered from some contraction of the bowel. Her abdomen was enormously distended, interfering with the free action of the diaphragm, her pulse was quick and weak, and she had a very unhealthy aspect.

Upon examination I discovered two inches from the anus a dense membrane, in which a triangular opening existed barely large enough to admit a goosequill. I incised the membrane in eight or nine points, and dilated it freely with the forefinger. Under the daily use of enemata the size of the abdomen rapidly decreased, now that the feces could readily pass. Dr. Hall dilated the contraction with an instrument expanding laterally. Subsequently I incised the margins a second time. When I first saw the child I diagnosed that the case had originally been one of imperforate rectum, into which an opening had been made

with a trocar, and the child then left to fate. I afterwards learned from the mother that nothing passed from the bowel after the child was born, and to remedy this a sharp instrument had been used. I saw Dr. Hall last autumn (1862), when he informed me our patient had grown to a fine girl; she enjoys perfect health, and the bowels act in every respect naturally.

Imperforate rectum; operation thirty-three hours after birth; successful result.

I was requested by Mr. Knaggs to see a child in consequence of nothing having passed from its bowels since birth, and the supervening of symptoms inducing the belief of the existence of some congenital interruption in the contiguity of the intestinal canal. The child was a fine boy, born thirty-three hours previous to my seeing it. Nothing occurred within the first twenty-four hours to excite suspicion of any defect of organization; but, afterwards, the child was sick each time it took the breast, the ejected matters ultimately being tinged with meconium, the abdomen became tympanitic, and the infant evidently suffered severely: it was also observed that nothing had passed from the bowel. Under these circumstances my advice was sought, with the request that I would do anything I thought necessary to preserve the life of the child.

On making an examination, I found all the external parts natural, and it at once became evident that the impediment to the passage of the contents of the bowel existed above the anus: introducing my finger therein, it was arrested about two inches from the orifice by a membranous septum, occluding the rectum: a dull sense of bulging of the bowel downwards during the time the child cried was perceptible, from which I inferred the intestine was continuous above. With this impression I at once determined to attempt to remedy the defect of nature, and in the presence of Mr. W. Bennett and Mr. Knaggs I made a puncture through the septum with a very small scalpel, guided by the forefinger of the left hand; this was followed by oozing of meconium; and I then made several notches in the membranous partition so as to enable my finger to be passed freely through it. On removing the finger, the contents of the bowel readily escaped, and after a short time the child ceased crying, and soon fell into a quiet sleep: on awaking, it took the breast with avidity, had no sickness, and from this moment progressed most favorably. During several subsequent weeks I occasionally introduced my finger to ascertain that no contraction was taking place, and I forcibly impressed on the parents the great importance of the use of bougies.

When the child was about eighteen months old I again made several slight incisions in the indurated ring, which the former septum now presented, and advised the continuance of the dilation. I had the opportunity of watching the child till it was nearly three years old, and at the last examination I made, the diameter of the rectum was apparently continuous.

Mr. Wayte[1] operated on a child born 7th March, 1814, in whom the rectum was occluded by a septum. The malformation was not discovered till the child was two days old. In consequence of the closure of the opening, it was necessary to repeat the operation on the 23d of April, and again on the 27th, after which bougies were used daily. The child died of hectic when six months old: caries of the sacrum was supposed to exist.

A case occurred to Mr. Jenkins[2] of a male child born with imperforate rectum: the anus was perfect, and a *cul-de-sac* extended upward for about three-quarters of an inch. No attempt to remedy the condition of the parts was made till the eleventh day; a trocar and canula were then thrust through the rectal septum, and feces followed the withdrawal of the trocar. At the time of the report, twenty-one days after the operation, the child was progressing favorably.

Mr. Mason[3] records the case of a male child born with imperforate rectum; the malformation was not discovered till it was two days old. The finger introduced into the anus could be passed upwards for about three inches, at which point the canal was found to terminate. The bladder was distinctly felt anteriorly, and the sacrum posteriorly. A trocar and canula were passed through the occluding membrane: on withdrawing the former, a large quantity of meconium escaped. The child died twenty-four hours after the operation.

ABSENCE OF THE RECTUM.

The rectum is sometimes entirely absent, or it may be wanting in part only, the latter being the most frequent occurrence of the two. In either case there may be a well-formed anus, and above

[1] "Edinburgh Medical and Surgical Journal," vol. xvii. p. 378.

[2] "Lancet," vol. ii., 1837–8, p. 271.

[3] "Medical Times and Gazette," New Series, vol. vi. p. 573.

it a small pouch a few lines in depth, or there may be no appearance of that opening, the integument being continuous from side to side.

When the last part of the intestinal tube is only partially absent, the other portion usually terminates in a *cul-de-sac*, at a greater or less distance from the surface of the body, or it may be prolonged as a narrow tube or imperforate cord, and blended with the adjacent parts. When the whole of the rectum is absent, the intestinal canal may open in some abnormal situation: cases are recorded of the terminal opening being at the umbilicus; of the ilium opening externally above the pelvis; and two still more extraordinary cases, the one that of an infant, in which the inferior portion of the abdomen was badly developed, and the intestine turning upward opened under the scapula: in the other the intestine mounted from the pelvis, through the chest into the neck, and opened on the face by a small orifice.

When a portion of the rectum is absent, it becomes the surgeon's duty to do all in his power to establish an outlet for the contents of the intestine, otherwise the child must inevitably perish. If the anus be natural, the prospects of success will be greater, the probability being that there is no considerable interval between it and the intestine: and if the operator succeed in forming a communication, no ultimate inconvenience will be experienced. When the anus is present, the incisions must be made through it; but if it be absent, they should be commenced at the point it ought to have occupied. The child is to be held in the lap of an assistant, who should sit on a table before a good light; the knees and thighs are to be flexed, and the perineum presented precisely in the same manner as if the child were prepared for lithotomy. The surgeon, sitting on a low chair, then commences an incision about an inch long, which is to be carried more and more deeply in the natural direction of the anus, following the curve of the sacrum; the surgeon's forefinger of the left hand in the wound must guide the course of the knife. If the incisions be made directly upwards, or in the axis of the pelvis, the bladder or other parts of importance may be wounded; an opposite course, however, must be avoided, or the surgeon will get behind the rectum. The dissection may be continued, if necessary, as far nearly as the finger can reach. Should the

intestine be detected either by the feel and sense of fluctuation, or by being seen at the bottom of the wound, an opening is to be made into it, and the meconium evacuated; afterwards this opening must be maintained by the constant use of tents of prepared sponge, meshes of lint spread with ointment, and gum-elastic bougies. But should we not be so fortunate as to discover the bowel, and as the child must certainly perish unless an opening be made, we must make a final effort to succeed: a large-sized trocar and canula are to be inserted in the direction in which it is most likely to enter the intestine, and if successful, the trocar is to be withdrawn, and the canula left in the wound, and secured there by tapes.

Imperforate rectum and anus; the rectum descending to half an inch of the surface of the integument.

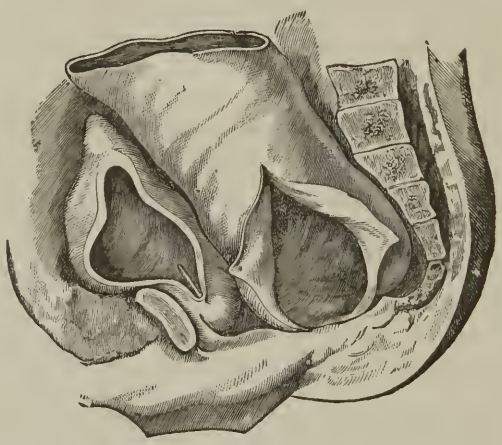
I was requested by my friend, Mr. Wm. Bennett, to see a child eight days old, having an imperforate anus. The mother had been attended in her confinement by a midwife: no advice had been sought on account of the malformation that existed in the child, and it only came under observation in consequence of the mother being seized with puerperal peritonitis, which terminated fatally within twenty-four hours of the supervention of the first symptoms.

On examination of the child, a slight depression was observed at the ordinary situation of the anus, over which the integument was continuous. By pressure with the point of the finger, a bulging and obscure sense of fluctuation was perceptible, conveying the idea of the rectum terminating in a *cul-de-sac* at a little distance from the surface; the abdomen was slightly distended; vomiting had occurred once. The child was in *articulo mortis* when I first saw it, and it was evident the time had passed for an operation to be of any avail, therefore no attempt was made to remedy the condition of the parts. The child expired in a few hours afterwards.

On post-mortem examination evidence of inflammatory action was observed, the whole of the intestines being agglutinated together by lymph. Tracing the large intestine, the rectum was found empty and collapsed, and terminating about half an inch from the external surface, the intervening space being occupied by dense cellular membrane; the onward passage of the contents of the bowels was prevented by the colon being bent at an acute angle on the rectum, and dipping down into the pelvis. This portion of the colon was distended with meconium; it was considerably dilated on one side, and adherent to the small intestines.

Trying to separate these adhesions, the colon was lacerated, the tissues at this point being of a deep color, and much softened in structure. It was this portion of the intestine which was felt bulging against the finger when pressure was made externally; and which would have been opened had an operation been performed.

The anal integument being reflected, a pale, thin, but distinct external sphincter was observed, in which no central aperture existed. The specimen, from which the engraving is taken, was presented to the Pathological Society.[1]



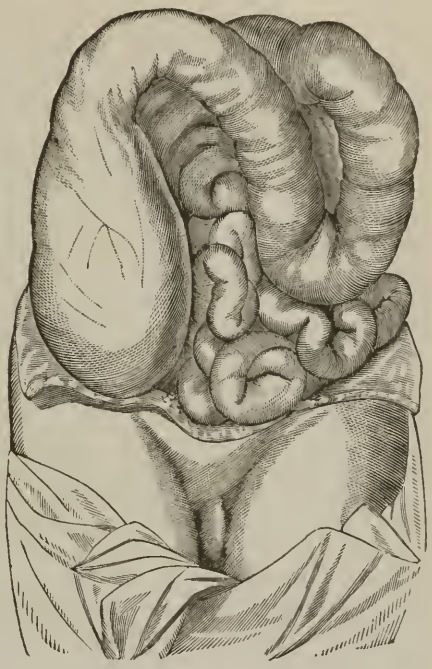
Partial absence, imperforation, and malposition of the rectum.

My opinion was sought in the following case, with the request that I might perform any operation that might be advisable. The child was five days old when it came under my observation, and when born had the appearance of being strong and healthy. It took the breast readily at first, but vomited after being suckled a few times. From the third day, this recurred the moment nourishment entered the stomach. Urine had been excreted, but nothing had passed from the bowels. The countenance indicated suffering; the abdomen was much distended, and tympanitic; slight pressure gave pain, and caused the child to cry violently. The anus was perfect; on introducing the finger, it was arrested about three-quarters of an inch from the surface; no bulging of the intestine above could be felt, and by pressure the anal *cul-de-sac* could be pushed up into the abdominal cavity.

No hardness or irregular fulness in any part of the abdomen

[1] See "Transactions," vol. v. p. 176.

existed, indicative of where the alimentary canal terminated. Under these circumstances I deem it unjustifiable to have recourse to any operative procedure. The child died on the seventh day from its birth.



After death, I was permitted to make an examination. The organs of the thoracic cavity were normal in structure and position, as also were the stomach, liver, pancreas, spleen, and kidneys; the small intestines, much distended with flatus, were found occupying the left and anterior part of the abdominal cavity; the ascending and transverse portions of the colon were normal; this intestine then descended a short distance on the left side, and recrossing the abdomen to the right side, terminated in a dilated pouch, as shown in engraving. This portion of the intestine was distended with meconium, and reached a little below the crest of the ilium, from thence a membranous prolongation connected it with the anal *cul-de-sac*. On opening the intestine, it was found perfectly impervious.

The correctness of the decision not to perform an operation was manifested by the relative position of the parts as described. Yet this conclusion has been impugned by a surgeon, who, if he were to operate in such a case, would, I fear, be more influenced by the imaginary *éclat* attending the use of his knife, than actuated by a just and due consideration of the preservation and well-being of his patient, based upon a deliberate and sound judgment. It is evident that had an incision, or a thrust with a trocar, been made, as is generally recommended, the peritoneal cavity and small intestines would have been wounded, but the terminal portion of the large intestine would not have been opened. The specimen was brought before the Pathological Society in March, 1855.[1]

[1] See "Transactions," vol. vi. p. 200.

Imperforation and partial absence of rectum; operation performed three times.

A lady and gentleman, residing in the neighborhood of Westbourne Terrace, brought their infant daughter to me, in October, 1856, requesting my advice. The child was fifteen weeks old, and when born was apparently well formed and healthy. After a day or two it was observed that nothing had passed from the bowels, and on examination it was discovered that the anus was imperforate. An operation was performed, and a canula introduced into the bowel, through which meconium and feces passed: proper means not being taken to keep the opening patent, it soon contracted and closed, and the operation had to be repeated, but due precaution not being taken, the opening again closed. For two days previously to the child being brought to me nothing had escaped from the bowel; vomiting occurred when it took food; it was thin and pale, and the countenance indicated long suffering. The abdomen was much distended and tympanitic. No anal depression existed, the integument being extended from side to side: by careful examination, a small opening was discovered; an ordinary probe could not be introduced, but one of half the usual size was passed upwards for its whole length. From the failure of the two operations the parents were fearful the life of the child could not be saved. I expressed an opinion that if an opening of sufficient size were established and maintained, there appeared no reason why the child should not live. Accordingly, I was requested to do whatever I thought necessary: and on the 14th of October, with the assistance of Dr. Sanderson, I performed the operation in the following manner: The little patient being held in position as for lithotomy, I passed with some difficulty a fine probe into the bowel, and having made an incision three-quarters of an inch in length through the integument, a director was introduced by the side of the probe, which was withdrawn: four notches were then made with a narrow bistoury run along the groove of the director: the tissues were dilated with the forefinger of the left hand, and at about an inch and a quarter from the surface the point of the nail could be got into a small aperture, the margins of which were very dense and resisting. A narrow probe-pointed bistoury being passed up on the finger, seven or eight notches were made in its margin, the tissues were dilated, and the finger passed into the bowel; on its withdrawal a large quantity of feces passed. An elastic tube, three eighths of an inch in diameter, was secured in the wound; the child was put to bed, and shortly fell asleep.

On the following day, the child's appearance had much improved; feces had passed freely through the tube, which was

removed and cleansed. I introduced my finger its whole length, and broke down the adhesions, which had commenced forming at the points of incision. A dose of castor oil was directed to be given.

After a week the tube was left out; and a number four rectum bougie directed to be passed up the bowel, and retained five minutes once in the twenty-four hours: after its removal the bowel was to be washed out with three ounces of warm thin gruel. For several weeks I saw this child daily, and introduced my finger to prevent the part contracting, the tendency to which was very great.

The child in a short time had perfect control over the discharge of the feces, and showed no symptoms of distress or uneasiness; it gained flesh, and became lively and intelligent. The size of the bougie was increased to number five, and then to six. With the exception of occasional indisposition from cold or other accidental circumstances, no child could progress more favorably. I continued to visit it once or twice a week, and saw it alive on the 31st of January, 1857, when it appeared remarkably well and lively. On the 5th of February, I received a message to say that the child had died suddenly while in bed, about half-past eleven o'clock. The mother had seen it ten minutes previously; it was then breathing easily, and appeared quite well. The following day I made a post-mortem examination. The thumbs were firmly contracted into the palms of the hand. The stomach was much distended, and contained a large quantity of undigested food; the intestines contained a small quantity of feculent matter, and the colon was empty. The rectum was normal in size, and terminated at an inch and a quarter from the surface.

Absence of a portion of the rectum; the bowel reached through an incision an inch and three-quarters in depth; the child well upwards of three years after the operation.

My aid was requested in the case of a male infant three days old, having no terminal aperture to the alimentary canal. The child was born of healthy parents, at the full period of gestation; the mother had had three children previously, all of whom were alive and well formed. Her labor was natural, and nothing wrong with the child was observed at first, either by the midwife or mother. The child was somewhat less than the average size, but its body and limbs were well developed: it took the breast naturally the first two days, and evinced no signs of discomfort, till towards the evening, when sickness commenced, and the abdomen became distended; at the time I saw the infant, pressure evidently produced pain, vomiting had continued from the previous evening, and the ejected matter was then of a yellowish

color; and it cried violently, and tossed itself about. It was not till some hours before I was called to the child that any defect of organization or malformation was suspected, although it was noticed that nothing had passed from the bowels.

On examination I observed the genital organs were perfect, and the scrotal raphe was extended backwards across the perineum towards the coccyx; there was no anal aperture, but a very slight depression existed at the situation where it ought to have been. By pressure of the finger I was unable to detect anything like the rectum above, but as the child had taken food freely, and the symptoms of obstruction had not occurred early, or were excessively severe, I hoped to find the bowel not far from the surface, and I decided at once to make an attempt to reach it. A nurse sitting in a high chair held the child on her lap in the position for lithotomy, and the two surgeons of the Bloomsbury Infirmary kindly rendered me what assistance I required. I first made an incision through the integument, about an inch and a quarter in length, the centre of which corresponded to the natural situation of the anus; it was carried to the depth of half an inch, and the bottom of the wound carefully explored with the finger, but without detecting anything like the bowel. I now requested one of my assistants to make firm pressure on the walls of the abdomen, while I continued the dissection; having reached a depth of an inch and three-quarters from the surface, I had the satisfaction of feeling the bowel distinctly, and after a little more dissection, so as to expose it completely, I grasp it with a pair of artery forceps, and brought it to the external margin of the wound, and made a free incision into it, and immediately a considerable quantity of excrementitious matter escaped, to the manifest relief of the little sufferer. Having cleaned the wound, I connected the incised margins of the bowel to the integument by several points of interrupted suture; in effecting this I used very fine silk, which I tied tight; I also took up no more of the intestine and integument than was sufficient to keep the parts together, my object being that the sutures should cut themselves out by the time they had served their purpose. Soon after the operation the child became tranquil, took the breast, and afterwards slept soundly. On the succeeding day its appearance had greatly improved, and no one would have suspected it had been the subject of so serious an operation. I learned that the intestinal contents passed freely, and that there was no protrusion of the bowel; the terminal portion of the intestine united to the surface of the wound. There is little remarkable to observe in the subsequent progress of the case, further than that as the child grew, it had perfect control over the action of the bowels, and enjoyed good health during the time I had it under observation, which extended till it was nearly four years old.

Most surgeons who have performed this operation have been unsuccessful in saving the lives of their patients; however, a few cases have succeeded. An interesting case of a child with imperforate rectum is recorded in Langenbeck's new *Surgical Bibliotheca:* the malformation was not discovered till twelve days after the child was born, when it was seized with hiccough and convulsions: the abdomen was protuberant and hard, pain was produced by pressure, and the child was much depressed. An incision, an inch in depth, was made in front of the coccyx, but it did not penetrate the intestine; it was then extended another inch, but with no greater success. The operator then had recourse to the pharyngotamus, with which he succeeded in piercing the rectum. Clysters and tents were afterwards used, and the child lived. I have in my possession a preparation given me by my friend, Dr. Quain, namely, a case of malformation of the rectum, in which the intestine terminated in a closed sac. The preparation was presented to the Pathological Society, and the particulars of the case are published in the Society's Transactions.[1] The anus was perfect, through which an incision was made by the surgeon in attendance, but he was unsuccessful in opening the bowel, and the child died on the ninth day.

Mr. Benjamin Bell met with two cases in which the intestine was very distant from the integument. In both he succeeded in forming an anus, but found it very difficult to keep it pervious. A very eminent author remarks, "Though keeping the opening dilated may seem easy to such men as have had no opportunity of seeing cases of this description, it is far otherwise in practice." In the ninety-eighth number of the *Edinburgh Medical Journal,* is recorded a case in which the tendency to closure in the artificial anus was so great that the operation had to be repeated ten times before the child was eight months old.

In Dr. Baillie's *Morbid Anatomy*[2] is a drawing of a specimen of imperforate rectum terminating in a *cul-de-sac;* the anus was perfect, and a short and narrow canal extended upward to within a short distance of the intestine.

Mr. Copland Hutchinson[3] attempted by means of a scalpel and

[1] Vol. i. p. 280.

[2] Fasciculus iv., plate 5, fig. 4.

[3] Op. cit., pp. 264–274.

trocar, to open the intestine of a child, to all external appearances similarly malformed to the one already alluded to, but was not successful in accomplishing the object, probably owing to the absence of the rectum. Some hemorrhage took place, which was restrained by application of lint saturated with turpentine. In another instance of a male child with the anus natural, but occluded half an inch from the surface, Mr. Copland Hutchinson endeavored to establish an opening in the bowel, by thrusting a trocar for more than three inches in depth without success. The child died a few hours after the operation; and a post-mortem examination revealed the intestine separated from the anal *cul-de-sac* by a quarter of an inch. The trocar had passed behind the intestine, and grazed its walls.

A female child, born the day previously, was brought to Mr. Meymott;[1] there existed no opening into the bowel. A depression existed just at the point of the coccyx, but there was no opening in the skin; the vagina was also occluded; a probe could be passed into an aperture corresponding to the meatus urinarius, but no urine was observed to pass. An incision was made into the perineum to the depth of two inches, and the bowel reached, which was made evident by the free escape of meconium. Castor oil, calomel, &c., were administered to the child; it died seventy-six hours after birth. No examination was made.

Mr. D. O. Edwards[2] records the following: a male child, born twenty hours previously, had had nothing pass per anum, and refused the breast; its abdomen was distended, and painful on pressure; the lower limbs were rigidly contracted on the pelvis; respiration was difficult, and the child constantly moaned. The anus was perfectly formed; the introduction of the finger detected an obstruction an inch from the surface. Forty-eight hours after birth this was incised with a bistoury, but the bowel was not penetrated; the bladder and bloodvessels were felt by the finger introduced into the wound; the child died the following day. An examination was made; the rectum terminated in a *cul-de-sac* at the middle of the sacrum, having a meso-rectum in its whole length, and a complete peritoneal covering. The

[1] "Lancet," vol. ii. 1829–30, p. 189.
[2] Ibid., vol. i., 1829–30, p. 637.

space of half an inch intervened between the termination of the rectum and anal *cul-de-sac*.

Mr. Lindsay,[1] in December, 1829, had brought to him a boy, eight months old, born with in imperforate anus, and absence of a portion of the rectum. An opening had been made, but at the time he saw him it was nearly closed; by bougies, &c., the aperture was enlarged, and the child grew and became perfectly healthy, but could not retain his feces. When between five and six years of age he lost flesh, and became very ill; it was found the artificial opening had closed so much that a quill could not be passed. Mr. Lindsay, conceiving the artificial anus was too near the coccyx, made another more anteriorly; ultimately the posterior opening was closed, and the child had perfect control over the bowel.

Mr. Smith, of Plymouth,[2] had a female infant brought to him, 17th January, 1840, thirty hours after its birth, in consequence of there having been no evacuation per anum. The anus was perfect, and admitted the finger to be passed up half an inch. Vomiting of a brownish feculent matter had taken place, and this recurred at intervals till the child died. It lived nine days. An examination after death revealed the colon, nine inches in length, terminating in a closed extremity at its transverse portion. A tortuous prolongation from the anus, ten inches in length, and about the size of a swan-quill, extended up the left side of the spine: it was isolated from the other portion of the intestinal canal. He also mentions another case of a female infant with imperforate rectum which came under his observation. A dense cellular tissue, three-quarters of an inch in thickness, separated the bowel from the anus. An attempt to relieve the child by operation was unsuccessful, and it died on the fifth day from its birth.

Mr. Gosse[3] operated on a child four days old, born with imperforate rectum. The incision was carried more than two inches in depth before the intestine was reached. The child lived till the twenty-fourth day, when it sank without any particular symptom.

[1] "Lancet," vol. i., 1835-6, p. 361.
[2] Ibid., vol. i., 1839-40, p. 794.
[3] "Medical Gazette," vol. vi., 1848, pp. 16, 17.

Mr. George[1] attended a lady who gave birth, on the 10th May, 1849, to a child in whom, when two days old, the rectum was discovered to be imperforate. The finger could be introduced up the anus for an inch. Sir Benjamin Brodie saw the case, and decided that an operation would be unadvisable. The child lived five weeks. After death, the terminal portion of the colon was found covered by peritoneum.

Dr. N. Chevers[2] operated on a male child, five days old, born with imperforate anus, and partial absence of the rectum: the instrument used was a hydrocele trocar, which was passed into the bowel, but the canula proved too small to permit of the escape of the intestinal contents; the child died, and the body was thrown into the river by the parents.

Dr. Parker, of New York,[3] records ten cases of imperforation and partial absence of the rectum. In three cases there was no anal opening; of these, the operation was successful in saving the lives of two of the children. In each of the remaining seven cases the anus was perfect, and a *cul-de-sac* extended upwards, to a greater or less extent; of these seven children the lives of two were saved; three died within twenty-four hours after the operation; one died on the seventh day from neglect, and the remaining one died in the seventh week from contraction and closure of the artificial opening.

I imagine few English surgeons would propose to adopt the operation of Littre or Callisen for opening the descending colon, much less in putting into practice that of Dubois, of opening the sigmoid flexure of the colon, and passing a strong probe through it towards the perineum, by pressure, rendering the end prominent, if possible, and then cutting down upon it. So formidable an operation upon a new-born infant could scarcely be otherwise than fatal. But though the surgeon may not be justified in proposing to open the colon from the groin, he may be compelled to undertake it at the urgent entreaties of the relatives of the child. He should distinctly state the uncertainty of a successful issue, and what will be the after condition of the patient if it survives. The manner of performing the operation is as follows: The child

[1] Medical Gazette, vol. ix., 1849, p. 280.

[2] "Indian Annals of Medicine," No. 1, p. 296.

[3] "New York Journal of Medicine," New Series, vol. xiii. p. 319.

being placed on a pillow, an incision about two inches in length is made midway between the anterior superior spinous process of the ilium and the pubis, a little above Poupart's ligament, in a direction parallel with the course of the epigastric artery; the integument, the several layers of muscles, and the transversalis fascia are to be divided; the peritoneum being exposed, is to be pinched up, and an opening made by cutting horizontally through it; a director or the finger is then to be passed into its cavity, and the incision enlarged to the extent of the external one. If the intestine be now seen, it is to be brought close to the wound, and two double ligatures, near to each other, are to be passed through it, by which the intestine is to be secured to the margins of the abdominal opening; after which, by making a longitudinal incision between the ligatures, the meconium will escape. If the child live, adhesive inflammation is set up between the peritoneal surfaces in apposition, and closes external communication with the cavity. The evils to be afterwards contended with are, a tendency in the external opening to close, the protrusion of the mucous membrane of the bowel, and excoriation of the integument from the irritation of the excretory matter, and the friction of the bandages, or apparatus used, to occlude the opening.

UNNATURAL TERMINATIONS OF THE RECTUM IN THE BLADDER AND URETHRA.

The rectum, instead of terminating at the anus, is sometimes prolonged forwards in the form of a narrow tube, and opens into the posterior part of the urethra. This malformation is more common in males than females; and in the former is more likely to be fatal, from the length and narrowness of the urethra. In most of these cases of malformation, some imperfection of development coexists, especially of the genito-urinary organs. The opening of the intestine is usually very small, and permits only the more fluid portion of the meconium to be evacuated.

In other instances, the intestine opens into the bladder somewhere between its neck and the part where the ureters enter: in such cases the meconium and urine will be mixed; but when the opening is urethral, a jet of meconium, or fecal matter, will generally precede the urine.

In this species of malformation, the opening for the discharge of the contents of the bowel being so small, the child rarely survives more than a week, but instances are recorded of life being prolonged beyond that. Fortunatus Licetus[1] mentions a woman who voided her feces through the urethra. Flagini[2] relates the case of an infant in whom about three inches of the rectum was wanting, the intestine terminating in a canal four inches in length, which passed under the prostate gland, and opened into the membranous portion of the urethra. The stercoraceous matter of course was voided with great difficulty by the urethra; nevertheless, the miserable babe lived eight months, and then only died in consequence of having swallowed a cherry-stone, which lodged in the recto-urethral canal. Bravais[3] records the case of a boy four years and a half old, in whom the rectum, after becoming very narrow, opened into and appeared continuous with the urethra. Paulletier[4] also saw a similar case in a boy three years and a half old.

Mr. Copland Hutchinson[5] operated on a male child, born forty-eight hours. An incision was first made to the depth of an inch and a half, then a trocar and canula were inserted another inch and a half, when the intestine was reached: the opening was maintained by tents and bougies. After three months the urine was observed to be tinged with feces: it had not been observed to pass per anum. The child died when about ten months old, from the irritation of dentition. An examination revealed a valvular opening between the rectum and commencement of the urethra.

Mr. Fergusson[6] reports a very interesting case of a male child born twelve hours previously to coming under his observation. No anus existed, but the skin where it should have been had a brownish appearance; above this, at a considerable distance from the surface, an indistinct tumor could be felt. An incision

[1] "De Monstrorum Causis Natura et Differentiis," lib. ii., cap. liii., 1616.

[2] "Observazione di Chirurgia," tome iv., obs. 39.

[3] "Actes de Lyon," tome iv. p. 97.

[4] "Diction. de Science Méd.," tome iv. p. 157.

[5] Op. cit., p. 264.

[6] "Edinburgh Medical and Surgical Journal," vol. xxxvi.; and "Practical Surgery," Third Edition, p. 740.

was made to the depth of an inch and a half, but the bowel was not reached, nor could it be felt. The next day, meconium being observed to pass by the urethra, Mr. Fergusson determined to cut into the bladder, and he opened this viscus immediately behind the prostate. The boy died of disease of the lungs, when about six years old. Mr. Windsor,[1] of Manchester, relates a case of ascites in a fœtus born at the full period: there was malformation of the rectum, and other viscera, and absence of the anus. The colon was nine and a half inches in length: it passed in a straight line down the spine, terminating in a constricted tube, which barely admitted the passage of a blowpipe: this constricted part opened into a pouch the size of a hen's egg, occupying the portion of the rectum, and between which and the bladder a communication existed by a canal half an inch in length.

Mr. Randolph, of Hungerford, records in the *Lancet*[2] the particulars of a male child born without any opening in the anal region. Small quantities of meconium were observed to pass per urethram. The infant died on the ninth day. No operation was undertaken for its relief, as the mother objected. By examination after death, the rectum was found to open into the bladder immediately posterior to the prostate gland.

Mr. Lizars, quoted by Mr. Fergusson,[3] made an opening into the rectum of a child born with imperforate anus; he had to cut deeply before the intestine was reached. A communication between the rectum and bladder existed. The child lived three weeks; from the time of its birth, a tumor existed over the dorsum of the ilium; fluctuation was perceptible, and the parts had a peculiar appearance. After death, the tumor was found to be an abscess, which extended upwards, and opened into the canal of the lumbar portion of the spinal column.

Mr. Tatham,[4] of Huddersfield, operated 16th of January, 1835, on a male child, two days old, for imperforate anus. The urine had been observed to be mixed with the contents of the bowel. The bowel was reached by an incision carried to the depth of one inch from the surface. The child lived to the 20th of March.

[1] "Edinburgh Medical and Surgical Journal," vol. xvii. p. 361.
[2] Vol. i., 1838–9, p. 162.
[3] "Edinburgh Medical and Surgical Journal," vol. xvii. p. 367.
[4] "Lancet," vol. i., 1835–6, p. 373.

An examination was made, and the bowel found to communicate with the neck of the bladder by a narrow canal, a quarter of an inch in length.

Dr. York,[1] of South Boston, punctured with a trocar the intestine of a male child born with imperforate anus; the operation was performed when it was three days old. The canula was left in the bowel for a week, after which the opening was dilated by a sponge tent; at the end of six weeks the opening was still more increased by incision, and a silver tube three-eighths of an inch in diameter was inserted and retained for a year. The tube becoming corroded when the child was about six months old, feces were observed to pass per urethram. The child died when eighteen months old, from the effects of a fall; for two months previously, the feces passed entirely by the urethra, the artificial anus having closed in consequence of the tube being left out.

Dr. Williamson,[2] of Aberdeen, saw a child twenty-four hours after birth, in whom there was no indication of an anus, "its usual situation being covered by smooth skin, of natural color, continued from the perineum over the buttocks." An attempt was made to open the bowel by incision, which was carried more than two inches in depth, without the object being accomplished. On the fourth day from the child's birth, feces were observed to pass by the urethra, and in a fortnight afterwards they began to pass freely, in which condition the child lived till it was eight months and twenty-two days old.

Dr. N. Chevers[3] had a male child, five days old, brought to him by its father, a Hindoo ryot. No indication of an anal aperture existed; the abdomen was much distended. An operation was performed, and a small canula introduced into the bowel. On the following day feculent matter was observed to pass by the urethra. The case terminated fatally on the thirteenth day after the operation. An examination of the parts was made, and a "narrow duct passing from the fore part of the intestinal *cul-de-sac* into the neck of the bladder, or membranous portion of the urethra," was found to exist.

[1] "Boston Medical and Surgical Journal," vol. xlii. pp. 273–4.

[2] "Medical Gazette," New Series, vol. ii. p. 767.

[3] Op. cit., p. 297.

When the rectum terminates in the urethra, the surgeon must endeavor to dissect down upon the extremity of the intestine, and establish a more convenient and larger opening than that formed by nature. If the urethra opens in the under part of the penis, as is not uncommonly the case, it may be possible to pass a probe into the intestine, which may be felt by the finger in the wound, and then cut upon. But if the intestine terminates in the bladder, the operation must be conducted in the same manner as if the rectum were wanting. It has been recommended to cut into the neck of the bladder, but a successful issue would be more than doubtful.

IN THE VAGINA.

When the rectum terminates in the vagina, the opening is much larger than when it terminates in the urethra. This form of malformation will also admit more easily of being remedied than that forming the subject of the previous section of this chapter, and may be situated either in the posterior or lateral wall of the vagina.

Although there is a greater probability of an infant living with this condition of parts, yet much suffering and inconvenience must arise from it: thus the mucous membrane will be excoriated, ulceration induced, and abscess may form in the adjacent cellular tissue.

Should the rectum terminate in a pouch, an opening from the natural position of the anus may very readily be made into it, by passing a blunt hook or bent probe through the recto-vaginal aperture, and rendering its extremity salient in the perineum, which will then be a guide for the knife. The artificial opening must be kept patent by tents and bougies. But sometimes the rectum tapers considerably before opening into the vagina: in which case an incision must be carried backward to a sufficient extent through the portion of the vaginal partition that is below the opening; a canula is then to be passed into the bowel, and retained by tapes. The anterior part of the wound is to be brought together by sutures; great attention to cleanliness will be necessary to promote the union of that which is to form the recto-vaginal septum.

Imperforate anus; the rectum opening into the vagina.

Mrs. B——, in consequence of fright, from the house in which she lived taking fire, prematurely gave birth, in Nov. 1856, when seven months and a half advanced in pregnancy, to a female child. It was diminutive, and its vital powers were low. For the first few days no malformation was suspected, as meconium and small quantities of feces had passed; but the child at length appearing to suffer pain, and the abdomen becoming distended, an examination was made, when it was discovered that the anus was imperforate, and that feculent matter passed per vaginam. No means were taken to remedy the condition of the parts.

When the child was about four weeks old, it came under the observation of Dr. Gibb, who desired the mother to consult me: she accordingly brought her baby to my house. On making an examination, there was no indication of an anus, the integument being continuous from side to side: at about the junction of the sacrum and the coccyx a depression existed, but no sinus or canal led from it. Externally, no other defect in its development was to be observed. Separating the vulvæ, at a quarter of an inch within the vagina, an opening was seen large enough to admit a number ten catheter: through this excrementitious matter oozed; a bent probe passed through it, and its point pressed downward, could be indistinctly felt externally. On considering the nature of the case, I proposed to establish an opening in the intestine more conveniently situated than that formed by nature. The parents being very desirous to have anything done that offered a probability of remedying the defect and saving the child, gave a willing consent that I should perform the necessary operation.

Dr. Gibb fully concurring in my views, with his kind assistance I operated on the infant the day following that on which I first saw it. The child being held with the perineum presenting, a strong probe bent was passed through the recto-vaginal opening, the point being pressed firmly towards the surface; an incision three-quarters of an inch long was made through the integument midway between the commissure of the vagina and the point of the coccyx; the point of the probe was then cut on and brought through the wound. I now discovered that the communication between the bowel and the vagina was by a narrow tube, and that by firm pressure at the bottom of the wound the pouch of the intestine could be indistinctly felt pressing downward when the child strained. The incision was cautiously continued to a depth of an inch and three-quarters, when the bowel was reached, and a puncture made with the point of the scalpel: a probe-pointed bistoury being then introduced, and the opening enlarged so as freely to admit the finger, on the withdrawal of which a considerable quantity of feces were discharged. About two ounces

of blood were lost during the operation. A full-sized lithotomy tube was secured in the wound, and retained for eight days, being removed only when it was necessary to clean it, and in examination of the parts. The artificial opening evinced a strong tendency to contraction, which was counteracted by the daily introduction of the finger for the first fortnight, and subsequently a number four rectum bougie which has been introduced and retained for some minutes daily. The bowel is also daily washed out with three ounces of thin gruel. After the operation only a trace of fecal matter was observed to pass through the recto-vaginal opening.

I have repeatedly seen this child, and on the last occasion (July, 1862) I made a careful examination; the recto-vaginal opening was small, but had not closed. On informing the mother of this, she expressed surprise; she had always attended the child herself, and no feces had passed per vaginam from the second or third week after the operation. She also stated that the child's bowels acted regularly, and that there was perfect control in retaining the feces. As is always the case, there still remained a great tendency in the artificial anus to contract, and I strongly insisted on the necessity of the occasional use of the bougie.

Mr. Mantell[1] operated, in September, 1786, on a female child with imperforate anus: a small opening existed between the rectum and vagina. In the spring of 1788, he had to repeat the operation in consequence of the closure of the artificial anus: another surgeon had previously performed the operation for the second time.

Mr. Copland Hutchinson[2] was consulted respecting a female child, four weeks old, in whom the anus was occluded, and a communication existed between the rectum and vagina, through which the feces passed freely. The mother would not consent to any operation. Mr. Bathurst, of Strood, had a child under his care in whom the feces passed per vaginam; there was also an external opening at the anus, but not larger than would admit a probe; it was dilated by bougies, and the abnormal aperture between the rectum and vagina closed spontaneously.

[1] "Memoirs of the Medical Society of London," vol. iii. pp. 389–392.

[2] Op. cit., p. 265.

OPENING IN THE SACRAL REGION.

La Faye, in page 358 of *Principes de Chirurgie,* records a case of deficiency of a portion of the sacrum, the rectum opening at the lower part of the back.

TERMINATING IN A COMMON OPENING WITH THE GENITO-URINARY ORGANS.

As Andral expresses himself, there sometimes appears to be a tendency in the terminal orifices of the digestive, urinary, and genital canals to be confounded together in a cavity more or less analogous to the cloacæ of birds. Sometimes the urethra occupies its normal position, and the recto-vaginal septum may be partially or entirely absent; all these malformations depending of course on an arrest in the development in various degrees of one or other of the stages through which the parts pass in their formation.

OTHER ORGANS TERMINATING IN THE RECTUM.

The lusus of the ureters opening into the rectum has been seen, but it is an anomalous condition extremely rare.

Note.—Since I commenced this edition, Dr. Bodenhamer, of New York, most courteously sent me a copy of his valuable and laborious treatise on the "Congenital Malformations of the Anus and Rectum." He has collected from the literature of various countries the reports of nearly three hundred cases; and his own observations on the etiology, pathology, and treatment of this very important subject are eminently sound and practical, and his labors have conferred a boon on the profession.

CHAPTER XX.

HABITUAL CONSTIPATION.

HABITUAL constipation is one of the most prevalent and troublesome functional disorders to which mankind is subject. Its sympathetic effects extend to every organ of the body, and often occasion great distress and anxiety to the sufferers, leading them to apprehend the existence of the most serious organic disease. Neither can it be doubted that many of the pathological changes in structure of the viscera of the head, chest, and abdomen have their origin in functional derangement, induced either sympathetically by constipation and consequent derangement of the assimilative organs, or by the retention of excrementitious matter. Of the sympathetic effects on the brain and nervous system thereby induced, we have evidence during infancy and youth in convulsive fits, chorea, and other nervous affections, and in adults in the giddiness, drowsiness, headache, pains extending to various parts of the body, and that distressing mental depression denominated hypochondriasis, which not unfrequently terminates in permanent perversion of intellect, or even in a more distressing manner. The sympathetic effects on the lungs and heart are indicated by cough and palpitation. The reaction on the stomach is marked by disordered appetite, vomiting, eructations, and a sense of gnawing and sinking at the precordia. We have evidence of the kidneys being affected in their morbid secretions, as marked by the various deposits we find in the urine. The exhalant functions of the lungs and skin also become deranged, as indicated by the fetor of the breath and perspiration; and many of the distressing and unsightly diseases of the skin have their origin in constipation and morbid accumulations in the bowels. Nor do the genito-urinary organs escape: thus urethral, vaginal, and uterine discharges and irritability of the bladder are frequently induced. The countenance of those who are the subjects of

habitual constipation is dull and heavy, the eyes lack their lustre, and the tongue is observed to be deeply notched transversely. It has been shown that many of the affections treated of in the preceding chapters often have their origin in this common cause.

To enter fully into the causes, symptoms, and remote sympathetic diseases and effects of constipation would far exceed the limits and objects of the present work; but a few remarks on the most common causes of constipation, depending on torpor of the colon, and the means of obviating that condition, will not be out of place.

Habitual constipation as a constitutional effect occurs in those whose vital powers are naturally low: thus during the earlier periods of life we most frequently meet with it in delicate females; but as age advances, and the organic functions become enfeebled, we find it prevailing in either sex. The most frequent accidental causes are sedentary habits, and the very common practice of not attending to the first calls of nature to evacuate the bowels. Fecal accumulations are thus favored, the bowel becomes distended, and in some instances to an amazing extent; its vital contractility is diminished, and it is rendered incapable of expelling its contents. Yet, notwithstanding this condition, frequently neither the patient nor medical attendant suspects the real mischief that exists, from the fact that diarrhœa may at the same time be present, consequent on the irritation induced by the overloaded state of the bowel. I have many times been consulted by patients suffering from the effects of fecal accumulations, who assured me their bowels invariably acted regularly each day: and what they asserted was quite correct; yet they were the subjects of torpor of the colon and fecal accumulations. On inquiring more particularly into such cases, it will be discovered, that though the bowels have been moved daily, the evacuations have been scanty, and that a sense of fulness and discomfort in the bowel remains: the fact being, that accumulations had been gradually increasing, and the softer and more recent excrementitious matter had passed over that which had been retained and become hardened.

The habitual use of large and warm enemata relax and distend the rectum, and enervate its functions; one of the effects of which

is to promote the occurrence of a form of intussusception and slight invagination of the bowel, the upper portion descending into the lower, occasioning many distressing symptoms; a dull, heavy pain and fulness is felt in the loins and sacral region, defecation is difficult and painful, and the calls to stool frequent; the evacuations are small, or passed in lumps, or being rendered fluid, from an increased secretion from the mucous surface, the result of irritation, are ejected as if from a syringe. These symptoms often induce a suspicion of the existence of stricture of the rectum, and the suspicion, although entirely groundless, may be apparently confirmed if an endeavor be made to pass a bougie, and it be arrested in the edge or fold of the semi-prolapsed portion of the intestine.

In the treatment of habitual constipation, the object to be attained is the removal of the cause, to procure fecal evacuations by the mildest and least irritating means adequate to the purpose, to restore the lost tone, and prevent the recurrence of the torpid condition of the bowels.

It is too frequently the case, the most inappropriate means are adopted to remedy this condition. Many people are in the habit of dosing themselves with calomel or blue pill, and black draught, or saline purgatives, which, besides teasing and tormenting the upper part of the alimentary canal for no fault of its own, is productive of very temporary relief and much permanent harm. I could cite innumerable instances, which have come under my own cognizance, of the mischief that has thus been induced, and many practical writers have made the same observation. Dr. Graves,[1] in his very valuable lectures on Clinical Medicine, remarks, "Various causes have combined to render blue pill and calomel almost popular remedies, to which many have recourse when their bowels are irregular, or the stomach out of order. Indeed, it is quite incredible what a number of persons are in the habit of taking these preparations, either singly, or combined with other purgatives, whenever, to use the common expression, they feel themselves bilious. This habit, sooner or later, induces a state of extreme nervous irritability, and the invalid finally

[1] "Clinical Lectures on the Practice of Medicine," by Robert J. Graves, M. D., Second Edition, vol. ii. p. 213.

becomes a confirmed and unhappy hypochondriac; he is, in fact, slowly poisoned, without the more obvious symptoms of mercurialization being at the time produced."

Should the rectum and colon be distended by fecal accumulations, they must be dislodged before we can possibly effect any benefit; for which purpose enemata will be the most efficient means; and the only effectual mode of administering them is by a long elastic tube.

In overcoming habitual constipation, much may be done without medicine. In attaining this object, it is essential that the patient should "solicit nature" at a certain period of the day, immediately after breakfast being the best time. By allowing the mind to be occupied, and, as it were, directing the attention to the subject shortly before visiting the closet, the desire will very probably occur. The influence of the mind is strongly marked in two gentlemen I am acquainted with; both are very regular in their habits, and are accustomed to evacuate their bowels shortly after breakfast; should circumstances occur, obliging the one to take his morning meal at an earlier hour than usual, he is unable to relieve himself, unless the organic functions are roused through the influence of the mind by thinking on the subject while he is dressing, and invoking, as it were, the assistance of nature. The converse is the case in the other gentleman; if anything unusual occupies his attention early in the morning, temporary constipation ensues, which he is unable to overcome by any effort without the assistance of artificial means; headache, flatulence, acid eructations, and pain at the epigastrium ensue, which continue till the rectum is freed, either by an enema or the return of his accustomed time of relieving the bowels, when the symptoms instantly subside.

Exercise is most important to the proper performance of defecation, and no one has a right to expect the enjoyment of health, unless he devote at least one or two hours every day to walking or riding. A glass of cold clear spring water taken early in the morning, and friction of the abdomen with the hand while at the closet, will materially assist in promoting the peristaltic action of the intestines.

However, the simple means suggested will not always be sufficient to accomplish our object, and it may be necessary to have

recourse to medicines. Saline aperients afford temporary relief, but they afterwards increase the tendency to constipation, and induce debility of the stomach and small intestines. The combinations that I have found most useful are stomachic bitters and aperients, as the decoction of cinchona, or compound infusion of gentian, with infusion of senna; dilute sulphuric acid and sulphate of magnesia in one of the bitter infusions, or the infusion of roses; seidlitz powders, with tincture of calumba and compound tincture of cardamoms. A teaspoonful of an electuary, composed of confection of senna, bitartrate of potash, carbonate of iron, and syrup of ginger, taken at bedtime, will, in many cases, have the effect of procuring a copious evacuation in the morning.

Nitric acid, with infusion of bark, without the addition of any aperient, will often give tone to the intestines, and produce a regular action. The compound extract of colocynth with quinine, to which, if necessary, one or two grains of blue pill may be added; or equal parts of the compound galbanum pill with the compound rhubarb pill will be found useful: to the foregoing I have, in some cases, added with advantage the oxide of silver. The extract of nux vomica, in combination with an aperient pill, has a powerful influence in relaxation of the rectum; or the alkaloid strychnia, in the proportion from a thirtieth to a fiftieth of a grain for a dose, may be prescribed with either of the foregoing mixtures. But lavements are the most important of all remedies in relaxation of the rectum: these should be the least irritating, so that the bowel may not be habituated to this means of stimulation, and they should not exceed in quanity half a pint. I have seen important benefit result from the injection of six or eight ounces of cold water after each dejection, and its retention for a few minutes: when the relaxation has existed for some time, it may be necessary to add some vegetable or mineral astringent.

In concluding, I may recapitulate in a few words the principles on which habitual constipation is to be treated. In the first place it is highly essential that all who are able should take daily exercise, short of fatigue; if, from bodily debility or other cause, the patient is unable to leave the house, frictions of the abdomen at the closet, or whilst he is in bed, should be had recourse to; a regular period should be observed for evacuating the bowels, and if the nisus does not occur, the mind should be made to dwell on

the subject a short time previously, that the desire may be provoked: a glass of cold water, taken early in the morning, will often influence the action of the bowels. Enemata of cold water, with or without the addition of astringents, used after dejection, are important adjuncts in the treatment of habitual costiveness. When it becomes necessary to prescribe medicines to be taken by the mouth, they must be so combined that, whilst they unload the bowels, they may strengthen and impart tone to them, and drastic purgatives which produce debility of the intestinal canal should be avoided. The diet of the patient must be regulated: breakfast should consist of weak cocoa, which is preferable in most cases to tea or coffee, with dry toast and fresh butter: with some people, brown bread is very useful in promoting the action of the bowels, yet in others it will induce pain at the epigastrium, flatulence, and heartburn. If the patient dine late, he may take a plate of thin soup, or a sandwich and a glass of water, for luncheon; at dinner he may partake of a moderate quantity of well-cooked vegetables, with brown meats well done; white meats are to be avoided, being less digestible: a very general opinion prevails that chicken is more easy of digestion than beef and mutton, but the converse is, in fact, the case; pastry must not be allowed, but there is no objection to light farinaceous puddings, or the Italian pastes, as maccaroni, vermicelli, &c., which are highly nutritious and easy of assimilation. According to circumstances, wine may or may not be taken: though a different opinion formerly prevailed, the French and Rhenish wines are more wholesome than port and sherry. Spain and Portugal grow many excellent light wines; but, from the little encouragement given to commerce by the governments of these countries, they seldom find their way to England. If any reason exist that wine cannot be taken, weak cold brandy and water may be substituted. In the evening, a cup of coffee, tea, or cocoa and a biscuit may be permitted; but the habit of taking wine or spirits before going to bed is to be entirely discountenanced. By the adoption of the plan suggested, and implicit obedience on the part of the patient to the rules laid down, we shall not often be defeated in our attempts to restore him to health and comfort.

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THE END.